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ABSTRACT

The post-school status of 87 individuals with moderate to severe mental retardation was assessed in terms of employment, education, living arrangements, day program participation, community involvement, and friendships. Interviews were conducted with informed respondents (usually parents or group home staff) for 27 individuals who had been out of school 7-10 years, 41 individuals who had been out of school 3-5 years, and 19 individuals who had been out of school 1-2 years. Comparisons of former students as a function of time out of school, gender, or severity of mental retardation revealed few differences. In general, all groups showed employment rates in the ranges of 30% to 45% with most working part time, often as part of training programs, and with average annual incomes below $2,000. Most former students lived in supervised residential placements, but had regular contact with relatives. Most individuals had special friends, but few had regular social contact with nonhandicapped persons who were not staff or family. Few individuals showed independence in various basic living skills. Post-school outcomes were related to personal competence variables, particularly measures of independence, adaptive behavior, and maladaptive behavior. Implications of the study for school curriculum and service changes are discussed. (DB)

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Assessing Post-School Outcomes for Students with Moderate to Severe Mental Retardation

Martha L. Thurlow
Robert H. Bruininks
Cheryl M. Lange

Project Report Number 89-1

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ASSESSING POST-SCHOOL OUTCOMES FOR STUDENTS WITH MODERATE TO SEVERE MENTAL RETARDATION

Martha L. Thurlow, Robert H. Bruininks, and Cheryl M. Lange

January, 1989

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Abstract

The post-school status of 87 individuals with moderate to severe mental retardation was assessed in terms of employment, education, living arrangements, day program participation, community involvement, and friendships. Interviews were conducted with informed respondents (usually parents or group home staff) for 27 individuals who had been out of school 7-10 years, for 41 individuals who had been out of school 3-5 years, and for 19 individuals who had been out of school 1-2 years. A small contrast group (n = 8) of former students one to two years out of school who had mild handicaps also was included.

Comparisons of former students with moderate to severe retardation as a function of time out of school revealed few differences on employment-related variables, or in other "quality-of-life" variables. Similarly, relatively few differences were found as a function of either gender or severity of mental retardation. Possible reasons for these nonsignificant findings are explored. In general, all groups showed employment rates in the ranges of 30% to 45% with most working part time, often as part of training programs, and with average annual incomes below $2,000. Most former students lived in supervised residential placements, but had regular contact with relatives. Most individuals had special friends, but few had regular social contact with nonhandicapped persons who were not staff or family. Few individuals voted or showed independence in various basic living skills.

Several significant correlations were found between measures of personal competence and composite outcome measures, reinforcing the notion that post-school outcomes are related to personal competence variables, particularly measures of independence, adaptive behavior, and to some extent maladaptive behavior.

Despite years of special education, many of the individuals with moderate and severe mental retardation achieved limited employment, social integration, and participation in community life. The expected improvement with time out of school, noted among samples with mild intellectual disabilities, was not found in these samples. These findings suggest possible implications for revising school curriculum and service practices, and for the organization of essential post-school services. Implications of this study for future follow-up endeavors also are discussed.

Assessing Post-School Outcomes for Students with Moderate to Severe Mental Retardation

Secondary public school programs for students with moderate to severe handicaps are a relatively recent phenomenon. Many individuals who are now in these programs would have been in institutional or segregated day placements in the past. With the move away from institutionalization and the trend toward greater integration of students in normalized situations, educational programing for these students is shifting toward increased emphasis on integration, and preparation for gainful employment and community living. Some of the impetus for the changes in programing certainly resulted from Public Law 94-142, which required that all children with handicaps be provided with a free, appropriate education in the public schools.

Educators, policy makers, and families are interested in assessing outcomes for students with moderate to severe handicaps, particularly outcomes that have resulted from programing shifts. As might be expected, however, there has been limited opportunity for schools to conduct follow-up studies on students who have passed through their programs. Limitations in opportunity have resulted partly from the newness of many programs and partly from the lack of evaluation systems feasible for schools to use.

Historically, studies that have followed individuals with moderate to severe handicaps over time have focused on special training programs that are not school-based programs. In addition, studies have varied in terms of their definitions of disability categories and in terms of the variables that are tapped for assessing post-school outcomes. Most focus on employment outcomes.

Table 1 is a summary of several early studies (from 1944 to 1967) in which students were followed after some years of public schooling. Most of these studies do not specify the exact number of years the subjects were in school. Only one study (Saenger, 1957) indicated that the subjects had more than five years of school. Also, subject selection criteria varied considerably; the IQ selection information is shown in Table 1 also. Table 1 includes a list of outcome variables that range from those that reflect employment and education to those that reflect financial and social integration. As indicated in the table, several of the earlier studies included measures of social integration. Unfortunately, these studies were conducted before 1975, when PL 94-142 was first enacted. Furthermore, the context was very different from what exists today. There is a need for follow-up information on students who have been in the schools since 1975.

Several studies since 1975 have assessed the success of special projects in providing secondary and post-secondary level individuals with skills that help them become employed and productive (e.g., Cho & Schuerman, 1980; Hill & Wehman, 1983; Walls, Tseng, & Zarin, 1976). Most of the projects were set up as "models," and they typically received special funding for follow-up and evaluation. Public school programs typically have not had the time nor the systems for conducting follow-up studies of their students. However, with recent calls for increased attention to developing transitional plans for students with handicaps, increased emphasis is being given to the need for information on how students do after they leave school, and what this information might say about the nature of programs for students when they are in school.

Table 1
Variables Examined in Early Follow-up Studies

Variable	B(67)	D(53)	H(44)	K(48)	P(58)	S(57)
Employment						
Job status	*	*	*	*	*	*
Earnings	-	-	*	*	*	*
Satisfaction	-	-	-	-	-	-
How found	-	-	*	-	-	*
Previous job	-	-	-	-	-	-
Job search	-	-	-	-	-	-
Education						
Current status	-	-	-	*	-	-
Job training	-	-	-	-	-	-
Financial Integration						
Support income	-	-	-	-	-	-
Pay taxes	-	-	-	-	-	-
Banking	-	-	-	-	-	-
Shopping	-	-	-	-	-	-
Social Integration						
Leisure activities	*	-	-	*	-	*
Marital status	*	-		*	*	-
Friendships	-	*	-	-	-	*
Living arrangements	*	*	-	-	*	*
Voter participation	-	-	-	*	-	-
Legal problems	*	-	-	*	*	-
Driver's license	-	-	-	-	-	-
IQ	<70	<50	50-75	45-75	51-70	severe

Note: Studies listed by letter and year are: B(67) = Baller, Charles, & Miller, 1967; D(53) = Delp & Lorenz (1953); H(44) = Hegge, 1944; K(48) = Kennedy, 1948; P(58) = Porter & Milazzo, 1958; S(57) = Saenger, 1957. Most of these studies refer to "few years" of schooling, or do not give reference to the number of years the subjects attended school.

Recent studies of the post-school status of students with moderate to severe handicaps have been relatively few in number. A survey of the literature identified only five studies since 1980 that examined the post-school status of students who had been in public school programs for students with moderate to severe handicaps (see Table 2). Edgar and Levine (1986) found that 39% of a group of 181 former students with severe handicaps had a job; an additional 9% were involved in further schooling. Edgar and Levine also obtained information on living arrangements (69% lived with their family), friendships (28% of parents reported that their child did not have friends), and legal problems (2% were reported to have had problems with the law). With another sample of students with severe handicaps, followed just six months after leaving school, Edgar (1987) found that 29% were employed and 18% were involved in further schooling; 65% were not engaged in any activity.

Hasazi, Gordon, and Roe (1985) found a 30% employment rate for a group of students with severe mental retardation who were one to five years out of school. (It should be noted that students in this sample were defined by their placement in a special class during high school; it is possible that some of these students might more appropriately be considered to have either moderate or even mild mental retardation.) Hawkins (1984) found 28% of a sample of former students with moderate to profound retardation who graduated in 1983 were employed. These individuals and another 22% were in post-secondary training. A study of 117 transitional age former students who had participated in public school programs for persons with moderate, severe, or profound retardation was conducted by Wehman, Kregel, and Seyfarth (1985). They found that approximately 21% were employed (12% in competitive employment and 9% in sheltered workshops).

The Ninth Annual Report to Congress on the Implementation of The Education of the Handicapped Act (U.S. Department of Education, 1987) confirmed that there is a continuing need to focus on the transition of individuals with moderate to severe handicaps from public school programs to adult life. The Report noted that services for older students, especially those between 18 and 21 years of age, are in need of improvement second only to services for preschool children. Particularly noted were needs related to vocational assessments, prevocational courses, and staff trained to deal with transitional students. When identifying particular groups of students with handicaps in need of services and programs, the Report indicated that states most often listed students with severe and profound handicaps.

Thus, local schools and rehabilitation agents continue to need evaluation data and an evaluation system that will help them to identify implications for modifying their programs and improving transition services. Effective programs, both at secondary and post-secondary levels, require the development of important and timely evaluation data on outcomes of schooling and adjustment of young adults with handicaps. There is particular need for studies focusing on the critical transition years when individuals enter young adulthood, and for information on the adjustment of older cohorts. Such information can help provide a sound empirical foundation for improving secondary programs, for developing critical transition programs for students leaving schools, for structuring more complex evaluations and for identifying continuing needs of people for structuring more effective school and rehabilitation services.

Table 2
Variables Examined in Recent Follow-up Studies

Variable	E(87)	EL(86)	Hs(85)	Hw(84)	W(85)
Employment					
Job status	•	•	•	•	•
Earnings	-	•	-	-	•
Satisfaction	-	-	-	-	-
How found	-	•	•	-	•
Previous job	-	•	-	-	-
Job search	-	-	-	-	-
Education					
Current status	•	•	-	•	-
Job training	-	•	-	•	•
Financial Integration					
Support income	-	-	-	-	-
Pay taxes	-	-	-	-	-
Banking	-	-	-	-	-
Shopping	-	-	-	-	-
Social Integration					
Leisure activities	-	-	-	-	-
Marital status	-	-	-	-	-
Friendships	-	•	-	-	-
Living arrangements	-	•	-	•	-
Voter	-	-	-	-	-
Legal problems	-	•	-	-	-
Driver's license	-	-	-	-	-

Note: Studies listed by letter and year are: E(87) = Edgar, 1987; EL(86) = Edgar & Levine, 1986; Hs(85) = Hasazi, Gordon, & Roe, 1985; Hw(84) = Hawkins, 1984; W(85) = Wehman, Kregel, & Seyfarth, 1985.

The collection of these kinds of data was the focus of activities completed for the Post-School Transition Study. The study incorporated descriptive research, comparative research, and longitudinal research, and included three primary samples of young adults with moderate to severe handicaps -- those just completing school, those who had been out of school for less than 5 years, and those who had been out of school for more than 5 years. These groups allowed for comparisons of outcomes as a function of time and according to severity of handicap, gender, and other demographic variables.

Method

Subjects

Subjects were students in a midwestern city school district who had completed their special education program and left the school district between the years 1975 and 1985. They were classified as having moderate to severe retardation. The total number of students identified for inclusion in the study was 95; of these, 87 students (91.6%) were located and completed the study.

The subjects represented three different groups. The first group (7-10 Yrs) consisted of students who had completed their special education program 7 to 10 years prior to the study (1975-1978). The second group (3-5 Yrs) had completed their education three to five years prior to the study (1980-1982). The final group (1-2 Yrs) included subjects who had either completed their education the year prior to the study or would be completing their schooling the year the study began (1984-1985). These students were followed after a one year period. In addition, a comparison sample of students in the same years as the 1-2 Yrs group who had mild handicaps was selected.

The most recent test results from the Stanford Binet Intelligence Test or the WISC-R (Full Scale), or the classification recorded by a school psychologist were used to establish the groups for this study. For the Binet, the mild group consisted of subjects whose scores fell between 52-67. The subjects in the moderate group had scores that fell in the 36-51 range. The severe classification was used for subjects whose scores were 20-35. Anyone whose score fell below 20 was excluded from the study. Those subjects who had WISC-R scores between 55-69 were included in the mild group. If the scores fell between 40-54 they were included in the moderate group. They were included in the severe group if their scores were from 25-39. Anyone whose score fell below 25 on the WISC-R was not included in the study.

A high school diploma was <u>not</u> a criterion for inclusion in any of the groups. Completion of public schooling, based on number of years served in special education programs, the student's age and the school's consideration of a complete public education were considered as criteria for being included in the study.

The school district had provided a variety of educational opportunities within the 10-year period in which the students had attended school. It was necessary to search many files to determine from which programs the subjects were to be taken. The district cumulative record files were searched for students who fell into the three groups. No records were kept in the cumulative files regarding disability. Consequently, the Individual Education Plans for the preceding 10 years also were investigated. Some students could be located for the 3-5 Yrs and the 1-2 Yrs groups, but there were no records for students of high school age during the 1975 to 1978 period (7-10 Yrs).

During the 1975 to 1978 period, the school district had worked with a cooperative special education district, which generally provided services to students with more severe disabilities. The records of the cooperative district were searched to identify students who were residents of the city. A number of students' records were found that corresponded with the number of students that school district officials considered as feasible enrollment for those years. The records were searched for IQ information, sex of subject, addresses, care providers, curriculum, school attended, and educational objectives. In addition, the district had a computer printout of IQ classification and a follow-up address for many of the students. The IQ information was taken from the most recently administered Stanford-Binet or WISC-R or was recorded in terms of the most recent classification given by a school psychologist.

A total of 31 students was found that met the criteria of city resident with moderate or severe handicapping condition and completion of school between the years 1975-1978. Of the 31 students, 27 (87.1%) completed the study (3 could not be located, 1 refused). All students with mild or profound retardation were excluded from this group.

During the years 1980-1982, students with handicaps who had attended the cooperative school district had a choice of completing their education through the special district or returning to the city school district to attend a school established specifically for students with moderate to profound retardation. The subjects in the 3-5 Yrs group came from different programs. Some attended the schools in the special cooperative district (4 schools) and others attended the city alternative school. The students in the 3-5 Yrs group, like those in 7-10 Yrs group, were city residents and were classified as exhibiting moderate to severe retardation. The IQ information was determined the same way for all groups.

All students classified as showing moderate to severe retardation from the 1980 class and all students showing moderate retardation from the 1981 and 1982 classes were included in the 3-5 Yrs group. An equal number of students with a severe classification were chosen from the 1981 and 1982 classes by using a random numbers table. There were 44 subjects included in the 3-5 Yrs group; 41 (93.2%) of them completed the study (2 could not be located, 1 refused).

The subjects in the 1-2 Yrs group had recently completed their education or were to complete it in 1985. They were identified while they were still students in a city alternative school; the study followed up on their activities one to two years later. These students were classified as exhibiting moderate to severe retardation.

Other students served by the city school district were used to form a contrast group of students with mild handicaps. Some of these were part of the high school based special education program (but, most time was spent in regular education) in four of the district's seven high schools. Of the 13 identified students, 5 (38.5%) were found and participated in the study. Other students in the contrast group had completed their special education in a special education placement in the same alternative school as the 1-2 Yrs group and a subset of the 3-5 Yrs group. Three of five (60.0%) identified students completed the study.

The breakdown of subjects in the four groups, according to gender and age is presented in Table 3. For the three groups of students with moderate to severe handicaps, 51% were female, and 49% were male. Within the 7-10 Yrs and 3-5 Yrs groups, 57% of the subjects were female, and 43% were male (which was similar to the

Table 3
Gender Distribution and Ages of Subjects

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Gender				
Male	13	16	14	7
Female	14	25	5	1
Age (years)				
M	30.7	26.6	22.9	21.2
Range	28.4-33.3	24.2-30.6	22.1-23.8	19.2-23.8

Note: Entries are numbers of students in each group.

original sample, comprised of 51% female and 49% male subjects). In the 1-2 Yrs group, 26% were female and 74% were male (again, similar to the original sample of 33% female, 67% male). In the Contrast group, 12% were female, and 88% were male.

Instruments

Two instruments were used in this study: (a) *Post-School Transition Study Survey Interview* (PTS), which was administered by a trained interviewer to a respondent familiar with the subject, and (b) *Inventory For Client and Agency Planning* (ICAP), which the respondent completed during the meeting with the interviewer.

Post-School Transition Survey Interview (PTS). The PTS is an interview designed by the research team to gather information on the subject's transition from school to adult life after high school. In addition, it was designed to provide the school district with a possible follow-up procedure for further study of the transition of students from high school into the adult world. A task force consisting of the research team, school district officials, and the local site coordinator met to review past research in this area and to determine what information was important to the central research questions of the study. The task force identified the following areas as being important to the study: (a) employment, (b) education, (c) social participation, (d) support payments, (e) social adjustment and living skills, (f) health/physical status, (g) family/household characteristics, (h) living arrangements, (i) service and program participation, (j) citizenship status, and (k) miscellaneous information. It was decided that the interview would include questions about each of these areas. The interview was to be a one on one interview and was to be kept to approximately 40 to 45 minutes in length.

To design the interview, two steps were taken. First, practitioners throughout the United States were surveyed about follow-up information they considered important for programs to have to plan for the needs of students in special education (see Lange, Thurlow, & Bruininks, 1988). Second, a survey was done of various post-school transition studies being completed in the United States. Certain studies were targeted as being similar in scope and procedure to the Post-School Transition Study in that some of the questions being asked were also questions the task force had determined to be important to the study, and the follow-up format was also an interview. These studies are included in Table 4. To increase continuity with previous research, interview questions from the similar studies were included as items in the PTS that were also on the task force list of concern. Where there were duplicate questions, the best question for the Post-School Transition study was chosen. The questions were taken verbatim when possible to maximize comparability of data. When necessary, the questions were changed slightly to fit more accurately or appropriately into the PTS. In areas where no questions could be found, the researchers wrote the appropriate questions.

The task force had additional criteria for the PTS. The PTS was to be a survey interview administered by a trained interviewer. The respondent was to be a person very familiar with the subject, such as a parent, care provider or employer. The language of the interview was to be kept as simple as possible.

The interview consisted of 11 sections designed to gather information about the subject's day to day life since leaving high school. The following sections were included:

Table 4

Summary of Areas in Which Information Was Reported for Eight Follow-up Studies[a]

Area/Subtopic	Study[b] ED	FA	HA	MI	SC	SE	WE	ZI
Employment								
Current Job status	*	*	*	*	*	*	*	*
Current earnings	*	*	*	*	*	--	*	--
Satisfaction	--	--	--	*	--	--	*	--
How found job	*	--	*	*	--	*	*	--
Previous job	--	*	*	*	*	*	*	--
Job search	--	--	*	--	--	*	--	--
Education								
Current status	*	*	*	*	*	--	--	--
Job training	*	--	*	--	--	--	--	--
Financial Integration								
Support income	--	--	--	*	*	--	--	--
Pay taxes	--	--	--	--	--	--	--	--
Banking	--	--	--	*	--	--	--	--
Shopping	--	--	--	*	--	--	--	--
Social Integration								
Leisure activities	--	--	--	--	--	--	--	--
Marital status	--	--	*	*	--	--	--	--
Friendships	*	--	--	--	--	--	--	--
Living arrangements	*	--	*	*	*	--	--	--
Votes	--	--	--	--	--	--	--	--
Legal Problems	*	*	--	--	--	--	--	--
Driver's License	--	--	--	*	--	*	--	--

[a]A "*" indicates that some kind of information (no matter how minimal) was collected and reported in the citation. It should be noted that some investigation reports focused only on one aspect of the information collected (e.g., Zigmond focused on dropouts compared to graduates) and thus the citation included here may not have reported all types of information that was collected.

[b]Studies are identified as follows: ED = Edgar et al. (1985), FA = Fardig et al. (1985), HA = Hasazi et al. (1985), MI = Mithaug et al. (1985), SC = Schalock et al. (1986), SE = Semmel et al. (1985), WE = Wehman et al. (1985), ZI = Zigmond & Thornton (1985).

Section A: Current Activities
Section B: Work Activities
Section C: Past Employment
Section D: Job Search
Section E: Education
Section F: Day Programs
Section G: Living Arrangement/Social Participation
Section H: Support/Family/Household
Section I: Citizenship
Section J: Support Programs
Section K: Social Adjustment/Living Skills

In addition to the above sections, demographic data were collected on the subject's birth date, date of interview, respondent's name, respondent's relationship to subject, and length of time the respondent had known the subject.

When the PTS was in its final form it was submitted to various groups to be critiqued for its content and readability. These groups included the task force, university professors, research coordinators, graduate students, parents and care providers of adults with mental retardation, and special educators. All groups made suggestions and the PTS was revised. When a final draft was nearing completion, pilot interviews were arranged to determine the length of the interview under an actual interview situation and to determine the readability of the various questions. A few additional changes were made at that time. The writing of the survey interview, along with the critiquing and pilot interviews, took approximately six months.

Inventory for Client and Agency Planning (ICAP). The ICAP (Bruininks, Hill, Weatherman, & Woodcock, 1986) is a tool for managing information in areas for planning and evaluating services for people who are handicapped, disabled, and/or elderly. Using the ICAP, it is possible to obtain, in addition to input on the subject's diagnostic and health status, normative scores for adaptive behavior and problem behaviors; information on service level (need for support and supervision), service history, current placements and projected service needs; and data on support services and social-leisure activities. It provides information that can be used to compare the adjustment of different groups to the adult world.

The ICAP is completed by the respondent, taking approximately 20 minutes. In this study, the respondent was asked to complete Sections A - E of the ICAP prior to the beginning of the PTS. These sections included: A - Descriptive Information, B - Diagnostic Status, C - Functional Limitations and Needed Assistance, D - Adaptive Behavior, and E - Problem Behaviors. Items included in these sections were developed by the ICAP authors through reviews of extensive literature on the functional assessment of clients and through consultation with direct service staff in residential and vocational settings, program managers, teachers, social workers, therapists, physicians, and other professionals from a variety of disciplines. Of particular interest in this study were Sections D and E. Section D (Adaptive Behavior) includes 77 items organized into four domains of independence: motor skills, social and communication skills, personal living skills, and community living skills. Normative scores can be derived by domain or for total independence. Section E (Problem Behaviors) includes eight categories organized to provide a profile of maladaptive behavior. Normative scores include four indexes: Internalized Maladaptive, Asocial Maladaptive, Externalized Maladaptive, and General

Maladaptive. Scores from sections D and E are combined to yield an overall Service Score that is a measure of need for care, support, supervision, or training.

Normative data for the adaptive behavior and problem behavior sections of the ICAP were gathered from 1,764 subjects in 40 communities distributed throughout the United States. The norming sample was selected to be as representative as possible of the United States population from age 3 months to 40 years and older. Stratifying variables included sex, race and Hispanic status, geographic region, and size of community; for adults, occupational and educational background also were stratifying variables.

Procedures

3-5 Yrs and 7-10 Yrs groups. Since the last known address for the subjects in these groups was from several years past, some detective work was necessary to find the subjects' current residences and phone numbers. The subjects were located by calling last known telephone numbers and contacting area group homes, school secretaries, social service agencies, sheltered workshops, and day activity centers. Anyone who worked with adults with handicapping conditions that may have had a recollection of a particular student was contacted. This procedure took approximately three months. Most people were contacted by phone. In some cases, when no one could be reached for inquiry, a letter was sent asking for help in locating a subject.

While these subjects were being located, two interviewers were chosen and trained in an all-day training session using a training manual written specifically for the PTS, a training video (Mathematica, 1982), and various handouts. When the training session was completed, the interviewers practiced administering the interview and were evaluated in a pilot training situation and during three pilot interviews. The interviewers, who had also been trained in telephone etiquette, were responsible for making appointments with potential respondents.

In order to arrange an appointment for an interview, letters were sent by the local site coordinator to parents, care providers, or employers concerning the study. The letter explained the study, asked for help in completing the interview and the ICAP, and indicated that someone would call to make an appointment. The interviewer then called the potential respondent and scheduled an interview. In the 3-5 Yrs and 7-10 Yrs groups, 68 of 74 (91.2%) agreed to an interview. In the 1-2 Yrs group, 19 of 21 (90.5%) agreed to an interview. During the phone call, the amount of time needed for the interview was explained, and the respondent was told there would be a $10.00 gratuity for his or her time.

Following the scheduling of the appointment, the local site coordinator sent a reminder notice which also included a permission form to be completed by the subject or the subject's guardian. Some respondents also were called a day or two before the appointment to remind them of the interview.

During the appointment, the interviewer collected the permission form and had the respondent complete the necessary form for the gratuity. The ICAP was explained and the respondent completed it (usually taking 20 to 30 minutes). The PTS was then explained and the interview began, usually taking 45-60 minutes to complete. The respondent was thanked for his or her time, with the interviewer having spent anywhere from one to two hours with the respondent.

Thank you letters were sent to all respondents by the local site coordinator. These included the gratuity and the respondent's copy of the permission form. When the respondent was not from the area, the interviewer sent the ICAP and the directions to the respondent for completion. The PTS was completed over the telephone. This occurred in only two cases in this study.

1-2 Yrs group. Locating subjects in the 1-2 Yrs group for follow-up was an easier task. They had been away from school for only one to two years and in many cases the school employees still had contact with the former students or with someone who knew them. The same procedures were followed in contacting and interviewing the subjects in this group.

Contrast group. The subjects in the Contrast group were located in the same manner as those in the 1-2 Yrs group. However, the procedures were different for determining who should be included. Subjects in regular education who received services in special education less than 3 hours per day were identified by contacting the district high school teachers in special education and asking them to identify the students within their programs who were considered to exhibit mild retardation and who were expected to graduate in the 1985 school year. The teachers reviewed their records and compiled a list of students who fit the criteria. At the time of follow-up, the subject was contacted directly. The study was explained to the subject and an interview time was scheduled. The same letters of explanation were sent to the subject as well as a reminder letter about the appointment. The interview was conducted directly with the subject who received the gratuity. In order to determine the reliability of the responses, the subject's parents or care providers were contacted and a shorter interview was conducted with them. Certain questions were taken from the PTS and used in the shortened interview. The parents or care providers also were asked to complete the ICAP information about the subject.

Subjects who received special education services during the entire school day, generally in a special school arrangement, were identified by reviewing the IQ information from the special district school. All students whose IQ fell within the mild classification or had been classified as being in the mild IQ group were included in this group. At the time of follow-up, respondents were interviewed using the same procedures as were used with the other groups.

Response Rates

Considerable time was spent locating subjects. The 7-10 Yrs group had a response rate of 27 out of 31 (87%). Within this group, three could not be found and there was one refusal. The 3-5 Yrs group originally had a response rate of 39 of 43 (90.7%). In this group, two could not be located, one refused to be involved, and one subject was deceased. Since some of the subjects had been identified by using a random sample of the students in a particular year with a particular handicapping condition, a random numbers table was used to replace two former students from a class year (1981) in which additional names were available. When those two were then substituted into the group, 41 of 43 (95.3%) were located. In the 1-2 Yrs group, 19 of 21 (90.5%) completed the study. There were two refusals and one subject could not be located.

It was more difficult to locate subjects for the Contrast group due to the unavailability of addresses and to the fact that most students in this group did not reside or work in facilities for individuals with handicaps. For the students served

primarily in regular education, 5 of the 13 (38.5%) identified students were located and interviewed. Six students could not be located and 2 students refused to be involved in the study. For the students served primarily in the special school, 3 of 5 subjects (60%) were found and interviewed. Two of the subjects could not be located.

The types of respondents in the final groups are shown in Table 5. The two primary respondent groups for the three groups with moderate to severe handicaps were the group home staff and parents, while for the group with mild handicaps (Contrast), the former students themselves were the primary respondents. There was a somewhat greater proportion of group home staff rather than parents serving as respondents for those former students who had been out three years or more. Parents were respondents with slightly greater frequency for those just out of school. For all groups of respondents, the mean number of years the respondent knew the subject was very similar, averaging about 13 years. In all cases, this average went back to before the subject left school. The mean numbers of years for the three groups of former students with moderate to severe handicaps were: 7-10 Yrs - M = 13.4, SD = 13.0, Range = 0-33; 3-5 Yrs - M = 12.4, SD = 11.3, Range = 0-30; 1-2 Yrs - M = 14 0, SD = 9.5, Range = 1-24. For subjects with mild handicaps, only three respondents were people other than the subjects themselves. These three people (two of whom were parents) knew the subject an average of 15.7 years (SD = 12.7, Range = 1-24).

Results

The results of the post-school outcome study are presented in three sections. First, follow-up outcome data are presented for the three groups of students with moderate to severe handicaps (7-10 Yrs, 3-5 Yrs, 1-2 Yrs), and for the Contrast group of individuals with mild handicaps. Recall that both the 1-2 Yrs group and the Contrast group with mild handicaps had been out of school just one to two years at the time of the follow-up survey. Statistical comparisons are made only among the three groups of students with moderate to severe handicaps. The results for the students with mild handicaps (Contrast) are presented basically for descriptive and comparison purposes for the results of the former students with moderate to severe mental retardation.

The second section of the results focuses on the findings from the ICAP. The third section presents the findings from statistical comparisons based on time out of school, gender, and severity of handicaps.

Post-School Outcomes

Daily Activities

Table 6 is a summary of the subjects' daily activities. More than one activity could be designated for a single subject. In 7-10 Yrs, 33% of the subjects worked, either full time (7%) or part time (26%). In the 3-5 Yrs, 47% worked, either full time (10%) or part time (37%). Forty-two percent of the 1-2 Yrs subjects worked (16% full time, 26% part time). And, 88% of the Contrast group with mild handicaps worked (25% full time, 63% part time). In all groups, those subjects who were working also could be attending a day program. In all groups except the group with mild handicaps, approximately three-quarters of the subjects were involved in a day program. No other activities were reported for more than 20% of any group.

Table 5
Respondents in Each Group

Respondent	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Self	--	--	2 (11%)	5 (62%)
Group Home Staff	17 (63%)	23 (56%)	7 (37%)	1 (13%)
Day Program Staff	--	--	--	--
Work Staff	1 (4%)	--	--	--
Parent	9 (33%)	15 (37%)	8 (42%)	2 (25%)
Foster Parent	--	1 (2%)	2 (10%)	--
Grandparent	--	1 (2%)	--	--
Social Worker	--	1 (2%)	--	--
Total N	27 (100%)	41 (100%)	19 (100%)	8 (100%)

Note: Entries are numbers of respondents, with percentages of the group in parentheses.

Table 6
Current Activities

Activities[a]	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Work	9 (33%)	19(46%)	8 (42%)	7 (88%)
Full-time	2 (7%)	4 (10%)	3 (16%)	2 (25%)
Part-time	7 (26%)	15(36%)	5 (26%)	5 (63%)
In Job Training	1 (4%)	4 (10%)	--	--
In Day Program	20(74%)	31(76%)	14(74%)	1 (13%)
Unspecified/other	1 (4%)	4 (10%)	3 (16%)	1 (13%)
Total N	27	41	19	8

Note: Entries are numbers of respondents, with percentages of the group in parentheses. Percentages may not total 100 because more than one activity could be designated for a single subject.
[a]Additional possible activity choices (homemaker full-time, student full-time, disabled and getting SSI benefits, unable to find work, and volunteer work) are not listed in the table because they were not ever selected for any of the four groups.

Work Characteristics

Only those subjects whose respondents reported them working (or working and attending a day program) were included for further analysis of work activities (7-10 Yrs: n = 9; 3-5 Yrs: n = 19; 1-2 Yrs: n = 8; Contrast: n = 7).

Current employment. Respondents were asked where the subjects worked and what they did at the job. The job locations and job descriptions were recorded and analyzed according to whether the job was one that (a) as its main goal, provided special services for individuals with handicaps, (b) was competitive employment, or (c) included a program in the competitive workplace for persons with handicaps. As is evident in Table 7, which is a summary of these data, few subjects with moderate to severe handicaps were involved in competitive employment; most subjects were employed in settings where services for individuals with handicaps was the main goal. Most students with mild handicaps, on the other hand, were in a competitive employment situation.

How the former students found their current jobs is summarized in Table 8. Respondents could select more than one response; thus, percentages may total more than 100% for a group. Diversity is evident in how jobs were found. In general, however, former students with moderate to severe handicaps tended to have been helped to find a job by their schools or social workers or by staff at their day program (the most frequent "Other" for 1-2 Yrs subjects). It is interesting to note that three possible responses (friends, employment agency, newspaper) were never cited.

Table 9 is a summary of several characteristics of the jobs of those working, including type of job, whether it was part of a training program, and how long the subject has worked. A trend in the type of job may be apparent in the data for former students with moderate to severe handicaps. Those out of school the longest and in different types of programs (7-10 Yrs) were spread among the major types, while those out 3-5 years primarily were in sheltered jobs and day or work activity centers. Subjects in the 1-2 Yrs group primarily were in "other" settings, which for the most part were jobs in their day programs (one subject was in a school to work transition program). Subjects with mild handicaps primarily were in regular jobs.

The majority of former students were working in jobs that were part of training programs (see Table 9). This was less often the case the longer the subject had been out of school. The percentage of subjects with mild handicaps whose job was part of a training program was essentially the same as the percentage of subjects with moderate to severe handicaps who had been out of school 7-10 years.

The job tenure of subjects varied from approximately one month to ten years (see Table 9). As expected, the average number of weeks on the job increased for groups as a function of time out of school. For the two groups out of school 1-2 years, the average number of weeks was larger for those with mild handicaps compared to those with moderate to severe handicaps.

Information on the former students' earnings is presented in Table 10. On the average, former students in each group worked about 20 hours per week. The range was quite large, however, with some working as few as 2 hours per week and others working 40 hours per week. Annual income was approximately the same (about $1700) for the 7-10 Yrs and 1-2 Yrs groups. Former students in the 3-5 Yrs group earned an average of about $1200 and those with mild handicaps earned an average of about $2600.

Table 7
Special Services by Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Provides Special Services	6 (67%)	17 (89%)	3 (38%)	2 (29%)
Competitive Employment	1 (11%)	--	2 (25%)	4 (57%)
Program for Hiring Handicapped	2 (22%)	2 (11%)	2 (25%)	--
Don't Know	--	--	1 (12%)	1 (14%)
Total N	9	19	8	7

Note: Entries are numbers of subjects, with percentages of those in group who worked (see Total N) in parentheses.

Table 8
How Job was Found in Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Self	1 (11%)	--	--	2
Parent	1 (11%)	1 (5%)	--	--
School	2 (22%)	4 (21%)	2 (25%)	2 (29%)
Vocational Rehabilitation	1 (11%)	1 (5%)	2 (25%)	--
Other	2 (22%)	2 (11%)	5 (63%)	2 (29%)
Social Worker	2 (22%)	8 (42%)	1 (13%)	1 (14%)
Group Home Staff	--	4 (21%)	--	--
Total N	9	19	8	7

Note: Entries are numbers of subjects, with percentages of those in group who worked (see Total N) in parentheses. Percentages may not total 100 because more than one activity could be designated for a single subject.
[a]Additional possible source choices (teacher, friend, employment agency, newspaper ad, advocate agency, and brochure) are not listed in the table because they were not ever selected for any of the four groups.

Table 9
Characteristics of Jobs for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Type of Job				
Regular	3 (33%)	1 (5%)	1 (13%)	3 (43%)
Sheltered	4 (44%)	7 (37%)	2 (25%)	2 (29%)
Activity Center	2 (22%)	8 (42%)	--	--
Other	--	3 (16%)	5 (63%)	2 (29%)
Job was Part of Training Program	5 (56%)	14 (74%)	7 (88%)	4 (57%)
Job Tenure (Weeks)				
M	216.67	116.56	46.63	76.57
SD	204.90	60.13	22.33	76.12
Range	12-520	32-216	4-76	4-208
Total N	9	19	8	7

Note: Entries for Type of Job and Job Part of Training Program are numbers of subjects, with percentages of those in group who worked (see Total N) in parentheses. For Job Tenure, the data for the 3-5 Yrs group are based on 18 subjects; job tenure was unknown for one.

Table 10
Earnings Information for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Hours Per Week				
M	24.2	17.7	20.2	24.9
SD	10.2	11.5	10.2	8.0
Range	6-35	2-40	10-35	12-38
N	9	18	8	7
Annual Income				
M	1747.18	1230.62	1789.44	2659.64
SD	1021.19	1339.98	1247.07	2068.28
Range	48-3350	6-4540	300-3640	625-9100
N	7	18	8	7
Other Information[a]				
Tips or Bonuses	1 (13%)	1 (5%)	--	--
Raises	2 (25%)	8 (42%)	--	2 (29%)
Promotions	3 (38%)	3 (16%)	--	--
Total N	9	19	8	7

[a]Entries are percentages based on number in group working, except for the 7-10 Yrs

Included in Table 10 is a summary of the percentages of subjects receiving tips or bonuses, raises, and promotions in each group. Except for two former students with mild handicaps, these extra earnings were not found for those 1-2 years out of school. In both the 3-5 Yrs and the 7-10 Yrs groups, several former students had received raises and/or promotions. For those subjects who had received raises, additional questions were asked. Respondents indicated that the raise was received because it was built into the job for 100% of those in 7-10 Yrs group, 44% for those in 3-5 Yrs group, and 100% of those with mild handicaps (no 1-2 Yrs subjects had received raises). In addition, 63% of 3-5 Yrs respondents and 100% of the subjects with mild handicaps indicated that raises also were based on good work.

Twenty percent of subjects in 7-10 Yrs and 20% of subjects with mild handicaps planned to get raises in the near future; no other group had this expectation. In all groups, a substantial number of peers had received raises on the job: 7-10 Yrs = 40%, 3-5 Yrs = 33%, 1-2 Yrs = 25%, Contrast = 20%.

The primary reason given for no pay raise for those subjects who had not received one was that there was no pay raise option (7-10 Yrs = 60%, 3-5 Yrs = 50%, 1-2 Yrs = 50%), except for those with mild handicaps, where respondents indicated that they did not know the reason. For the three groups of former students with moderate to severe handicaps, the next most frequently cited reason was the subject's poor production or job performance (7-10 Yrs = 40%, 3-5 Yrs = 50%, 1-2 Yrs = 25%). For subjects with mild handicaps for whom the reason was not unknown, reasons given were spread equally among no raise option (20%), just started (20%), and poor production or job performance (20%).

Respondents also were asked to indicate the subject's satisfaction with the job, the pay, the amount of work, and the opportunities for promotion. These data are presented in Table 11. For the 7-10 Yrs group, 63% of the respondents thought the subject was satisfied ("very" or "somewhat") with his or her job. This was many fewer than for the 3-5 Yrs group (94%), the 1-2 Yrs group (88%), and the students with mild handicaps (85%). In all groups, nearly all of the subjects were thought to be satisfied with the pay they receive. All of the respondents thought the subjects were satisfied with the number of hours they worked each week. In the 7-10 Yrs group, 67% were thought to be satisfied with their opportunities for a promotion, a percentage slightly above that for the 1-2 Yrs group (51%). Both students in the 3-5 Yrs group (89%) and students with mild handicaps (100%) were thought to be satisfied with their opportunities for promotion.

Other employment since school. Respondents were asked about current employment other than the primary jobs discussed above, and about past employment that occurred after leaving high school. Information was sought also about periods of unemployment.

In all groups, very few or none of the subjects were working at more than one job. In the 7-10 Yrs group, 13% had another job and in the 3-5 Yrs group, 5% had other employment (both representing one person), while no subjects in the other two groups had a second job. Some respondents in all groups indicated that the subject had prior employment; (56% of 7-10 Yrs, 26% of 3-5 Yrs, 63% of 1-2 Yrs, and 71% of the students with mild handicaps).

Table 12 is a summary of the incidence of unemployment since high school for all subjects and, for those who had been unemployed, the average number of weeks of unemployment. As indicated in the table, substantial unemployment had occurred across

Table 11
Satisfaction with Job, Pay, Amount of Work, and Chance for Promotion in Each Group

Satisfaction with:	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Job				
Very	2 (25%)	13 (68%)	6 (75%)	5 (71%)
Somewhat	3 (38%)	5 (26%)	1 (13%)	1 (14%)
Not Very	2 (25%)	1 (5%)	1 (13%)	1 (14%)
Not at All	1 (13%)	--	--	--
Pay				
Very	5 (63%)	15 (83%)	7 (88%)	2 (29%)
Somewhat	3 (38%)	2 (11%)	1 (13%)	4 (57%)
Not Very	--	1 (6%)	--	1 (14%)
Not at All	--	--	--	--
Amount of Work				
Very	5 (53%)	10 (53%)	5 (63%)	3 (43%)
Somewhat	3 (38%)	9 (49%)	3 (38%)	5 (57%)
Not Very	--	--	--	--
Not at All	--	--	--	--
Opportunities for Promotion				
Very	1 (17%)	8 (42%)	3 (38%)	4 (57%)
Somewhat	3 (50%)	9 (47%)	1 (13%)	3 (43%)
Not Very	2 (33%)	2 (11%)	1 (13%)	--
Not at All	--	--	--	--

Note: Entries are numbers of subjects, with percentages of those in group who worked in parentheses, except for 7-10 Yrs where n=9 throughout and for 1-2 Yrs for Opportunities for Promotion, where n=5 due to 3 Don't Know responses.

Table 12
Unemployment Information for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Ever Unemployed	11 (42%)	13 (33%)	10 (56%)	2 (29%)
Total N	27	41	19	8
Weeks Unemployed				
M	181.5	49.9	27.3	32.0
SD	224.1	71.2	40.7	28.3
Range	20-520	1-208	1-104	12-52

Note: Entries for "Ever Unemployed" are numbers of respondents, with percentages of the group in parentheses. For 3-5 Yrs, the percentage is based on a number that includes 2 "Don't Know" responses. M, SD, and Range are based on only those subjects who had

all groups, being lowest (29%) for the subjects with mild handicaps and highest for the 1-2 Yrs group (56%). The average number of weeks unemployed corresponded to the time out of school, with the 7-10 Yrs group showing the largest average number of weeks of unemployment. One former student in this group had been unemployed since leaving school (i.e., 10 years). None of the subjects had received unemployment benefits or checks.

Employment during school. Respondents also provided information about the former students' jobs during summers when in high school, and during the school year. For these jobs, respondents were asked about how the jobs were found, what kinds of special services were provided, whether the jobs were supervised placements, whether they were part of the school program, and whether payment came directly from the employer.

Table 13 is a summary of the numbers of students who had summer and school year jobs during high school, and the types of jobs they had. As indicated in the table, the percentages of students who had either summer or school year jobs during high school was higher for those leaving school more recently. Of the students with moderate to severe handicaps who had left school in the past one to two years, 50% had school year jobs when in high school. The types of jobs (competitive, provides special services, program for hiring handicapped) varied considerably, with no discernable pattern as a function of handicap level or years out of school. Despite some indication of higher employment rates during high school among recent graduates, the rates are still rather low.

How the students' high school jobs were found is summarized in Table 14. School year jobs were found almost totally through the school or through the Division of Rehabilitation Services; only students with mild handicaps found employment through other means (by self). For summer jobs, the sources were more varied, but still with the school and the Division of Rehabilitation Services being the primary sources through which jobs were found. Parents and relatives formed the next major source for finding summer employment.

Other characteristics of the former students' summer and school year jobs during high school are shown in Table 15. For the most part, jobs during high school (both summer and during school year jobs) were supervised and were part of the school program. Still, all were paid positions, and most often were paid by the employer.

Job-Finding Skills

Most subjects were not looking for work at the time the respondent was interviewed. For those subjects looking for work, respondents were asked about who was helping them. These data are presented in Table 16. Social workers and the day program were listed most often for the subjects' first choices. Second choices tended toward parents or group home staff. Consistent with this was the identification of the roles of persons helping subjects look for jobs. For all but two subjects, staff members were listed for the "relationship" of persons helping the subject to look for a job.

Respondents' views of subjects' job seeking strategies are summarized in Table 17. Clearly, for all except students with mild handicaps, it was believed that most subjects would do nothing; this was the response for approximately 70% of the subjects with moderate to severe handicaps, but for only 13% of subjects with mild handicaps. When

Table 13
High School Employment Information for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Had summer job during high school[a]	3 (11%)	8 (20%)	3 (16%)	4 (50%)
Had school year job during high school[b]	3 (11%)	8 (20%)	9 (47%)	5 (62%)
Type of Summer Job				
Provides Special Services	1 (33%)	5 (63%)	1 (33%)	--
Competitive Employment	1 (33%)	--	1 (33%)	2 (50%)
Program for Hiring Handicapped	--	3 (38%)	--	1 (25%)
Unknown	1(33%)	--	1(33%)	1 (25%)
Type of School Year Job				
Provides Special Services	2 (67%)	2 (22%)	2 (22%)	--
Competitive Employment	--	--	1 (11%)	5 (100%)
Program for Hiring Handicapped	--	6 (67%)	6 (67%)	--
Unknown	1(33%)	--	--	--

Note: Entries are numbers of subjects, with percentages of the group in parentheses.
[a]Many respondents did not know about the subjects' summer jobs during high school. The numbers of "Don't Know" or "No Response" answers were 3 (11%), 2 (5%), 1 (6%), and 1 (13%) across the 7-10 Yrs, 3-5 Yrs, 1-2 Yrs, and Contrast groups, respectively.
[b]Many respondents did not know about the subjects jobs during school. The numbers of "Don't Know" or "No Response" answers were 4 (15%), 3 (8%), 1 (5%), and 1 (12%).

Table 14
How High School Employment Was Found for Each Group

	7-10 Yrs	3-5 yrs	1-2 Yrs	Contrast
Summer Job				
By Self	--	--	--	--
Through Parent/ Relative	1 (50%)	--	--	1 (25%)
Through Voc Rehab	--	--	2 (67%)	--
Through Teacher or School	--	5 (56%)	3 (100%)	2 (50%)
Through Social Worker	1 (50%)	--	--	--
Employer Asked or Other	--	--	--	2 (50%)
School Year Job				
By Self	--	--	--	1 (20%)
Through Parent/ Relative	--	--	7 (78%)	--
Through Voc Rehab	--	--	7 (41%)	1 (20%)
Through Teacher or School	3 (100%)	7 (88%)	9 (100%)	3 (60%)
Through Social Worker	--	--	--	--
Employer Asked or Other	--	--	--	--
Unknown	--	1(12%)	--	--

Note: Entries are numbers of subjects, with percentages of the group in parentheses. Percentages may total more than 100% because respondents could give multiple responses, or may total less than 100% because respondents did not know how job was found.

Table 15
Characteristics of High School Employment for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Summer Job				
Supervised	1 (33%)	8 (100%)	3 (100%)	2 (50%)
Part of School Program	--	4 (50%)	3 (100%)	2 (50%)
Paid Employment	2 (67%)	7 (88%)	3 (100%)	3 (75%)
Source of Pay				
Employer	1 (33%)	5 (63%)	3 (100%)	3 (75%)
Someplace Else	1 (33%)	2 (25%)	--	--
Unknown	1 (33%)	1 (13%)	--	1 (25%)
School Year Job				
Supervised	3 (100%)	8 (100%)	9 (100%)	4 (80%)
Part of School Program	3 (100%)	8 (100%)	9 (100%)	4 (80%)

Note: Entries are numbers of subjects, with percentages of the group (in parentheses) based on the number who had each kind of job. Percentages may total more than 100% because respondents could give multiple responses, or may total less than 100% because respondents did not know.

Table 16
Who Helps Subject Look for Job: First and Second Selections

	7-10 Yrs		3-5 Yrs		1-2 Yrs		Contrast	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd
Parent	--	--	--	1(50%)	--	--	--	1(50%)
Group Home	1(33%)	--	--	1(50%)	--	--	--	--
Social Worker	1(33%)	2(100%)	3(60%)	--	--	--	1(25%)	--
DVR	--	--	--	--	--	--	1(25%)	--
Day Prgm	1(33%)	--	2(40%)	--	--	--	--	--
Placement of employment	--	--	--	--	1(100%)	--	--	1(50%)
Other	--	--	--	--	--	--	2(50%)	--
Total N	3	2	5	2	1	0	4	2

Note: Entries are numbers of subjects, with percentages of the group (in parentheses) based on Total N.

Table 17
Job Seeking Strategies

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
What Would Do To Get job				
Nothing	19 (70%)	29 (74%)	13 (72%)	1 (13%)
Ask for Help	3 (11%)	3 (8%)	1 (6%)	2 (25%)
Apply/Interview	1 (4%)	3 (8%)	2 (11%)	3 (38%)
How Would Find Out About Places Looking for Workers				
From Someone Telling	9 (33%)	16 (41%)	4 (22%)	--
Talk to Others	6 (22%)	2 (5%)	--	2 (25%)
Watch Help Wanted	1 (4%)	1 (3%)	--	7 (43%)
Check Newspapers	1 (4%)	--	1 (6%)	3 (38%)
Other	--	--	12 (62%)	2 (25%)
What Would Do When Hear Of Place Looking for Workers				
Talk to Others	5 (19%)	7 (18%)	--	--
Apply Independently	1 (4%)	1 (3%)	--	4 (50%)
Nothing	13 (48%)	22 (56%)	14 (78%)	2 (25%)
Total N	27	39	18	8

Note: Entries are numbers of subjects, with percentages of the group (see Total N) given in parentheses. Only those items indicated by at least 15% of the respondents are included in this table.

asked about how subjects would find out about places that look for workers, most respondents believed that someone else would tell them about work opportunities. For the former students with mild handicaps, however, the most frequent response was that the subject would watch for Help Wanted signs (see Table 17). And, when asked about what subjects would do when they heard that a place is looking for new workers (see Table 17), most respondents indicated that the subjects would do nothing. In contrast, the most frequent response from the subjects with mild handicaps was "apply independently."

Post-School Education

Attendance in post-school education is shown in Table 18, along with the types of classes taken. As is evident, minimal numbers were enrolled in post high school education; those who were enrolled were spread among academic, enrichment, and religious classes, although most were in academic. None of the classes was considered to be vocational classes. None of the students with mild handicaps were enrolled in any post high school classes.

Day Programs

Former students who were in day programs included 74% of each of the three groups with moderate to severe retardation, but only 38% of the students with mild handicaps. Table 19 is a summary of the types of day programs in which these individuals were enrolled and the frequency of attendance overall. Day Achievement Centers (DAC) were a frequently used day program for all groups except the students with mild handicaps. Former students who had been out of school 3 to 5 years or 7 to 10 years also used Work Activity Centers with notable frequency. For students with mild handicaps, all gave an "other" or "don't know" when asked about the type of day program. Further probing revealed that for 66%, the day program was a job placement and training program; one (33%) was in a program for autistic adults. The majority of former students in all groups spent four to five days and close to 40 hours in the day program each week. Yet, there was a considerable range in all groups in the number of days attended and in the number of hours per week.

Table 20 is a summary of the types of activities in which subjects were involved in their day programs. Other than the "other" category, which included a wide range of miscellaneous activities, personal living skills and recreation skills were among the most frequently mentioned for the 7-10 Yrs and 3-5 Yrs groups. These were followed by work skills, community living skills, and enrichment classes. For the 1-2 Yrs group, work skills were most common, followed by recreation skills and community living skills. For former students with mild handicaps, only work skills and community living skills were noted. When asked whether a job was part of the day program, the response was "yes" for 85% of the 7-10 Yrs group, 65% of the 3-5 Yrs group, 43% of the 1-2 Yrs group, and 100% of the former students with mild handicaps.

Satisfaction. Respondents' views of the subjects' satisfaction with their day programs are summarized in Table 21, along with their responses about their own satisfaction with the programs. Little evidence of dissatisfaction was found in these ratings. When asked about reasons for satisfaction or dissatisfaction, the primary reason given was "a positive subject outcome" for the 7-10 Yrs and 3-5 Yrs groups (36% and 32%) and "a positive program" for the 1-2 Yrs group (50%). The next two most frequently given reasons for satisfaction were "meets subject's needs" (26% and 29% for

Table 18
Subjects Attending Classes in Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Attending Class	2 (15%)	4 (15%)	1 (6%)	--
Total N	13	26	18	8
Type of Class				
Academic	1 (50%)	1 (25%)	1 (100%)	--
Enrichment	1 (50%)	--	--	--
Religious	--	1 (25%)	--	--
Unknown	--	2 (100%)	--	--

Table 19
Frequency of Attendance at Day Program for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Type of Program				
Work Activity Center	9 (45%)	8 (26%)	1 (7%)	--
Day Achievement Center	8 (40%)	19 (61%)	7 (50%)	--
Other	--	--	3 (21%)	2 (67%)
Don't Know	1 (5%)	3 (10%)	--	1 (33%)
Total N	20	31	14	3
Days Per Week				
0-2	--	1 (3%)	1 (7%)	1 (33%)
3	1 (5%)	2 (6%)	--	--
4-5	19 (95%)	28 (90%)	13 (93%)	2 (67%)
Hours Per Week				
M	37.7	34.5	34.8	26.3
SD	6.4	7.6	6.4	17.7
Range	21-50	8-48	14-40	6-38
N	20	30	14	3

Note: Entries for Type of Program and Days Per Week are numbers of subjects, with percentages of the group (see Total N) given in parentheses. For Type of Program, only those noted by more than 15% of the respondents in any group are reported here. Information on hours per week was unknown for one subject in 3-5 Yrs.

Table 20
Activities at Day Program for Each Group

Activities	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Enrichment Classes	6 (30%)	12 (39%)	3 (21%)	--
Personal Living Skills	11 (55%)	17 (55%)	2 (14%)	--
Community Living Skills	6 (30%)	10 (32%)	5 (36%)	1 (33%)
Sensory Motor Skills	2 (10%)	3 (10%)	--	--
Academic Skills	4 (20%)	10 (32%)	--	--
Behavior	2 (10%)	7 (23%)	2 (14%)	--
Work Skills	7 (35%)	15 (48%)	10 (71%)	2 (67%)
Recreation Skills	10 (50%)	19 (61%)	6 (43%)	--
Physical/Speech/ Occupational Therapy	2 (10%)	3 (10%)	1 (7%)	--
Other	14 (70%)	17 (55%)	8 (57%)	1 (33%)
Total N	20	31	14	3
Job Part of Program?				
Yes	17 (85%)	20 (65%)	7 (50%)	3 (100%)
No	3 (15%)	11 (35%)	7 (50%)	--

Note: Entries are numbers of subjects, with percentages of the group (see Total N) given in parentheses. Percentages may not total 100% because respondents could give multiple responses.

Table 21
Satisfaction with Day Programs for Each Group

Activities	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Subject's Satisfaction[a]				
Very Satisfied	12 (63%)	17 (55%)	12 (86%)	2 (100%)
Somewhat Satisfied	6 (32%)	5 (16%)	1 (7%)	2 (67%)
Not Very Satisfied	--	3 (10%)	1 (7%)	--
Not at All Satisfied	1 (5%)	1 (3%)	--	--
Respondent's Satisfaction				
Very Satisfied	12 (63%)	17 (55%)	12 (86%)	2 (100%)
Somewhat Satisfied	5 (26%)	7 (23%)	2 (14%)	--
Not Very Satisfied	--	5 (16%)	--	--
Not at All Satisfied	2 (11%)	2 (6%)	--	--
Total N	19	31	14	3

Note: Entries are numbers of subjects, with percentages of the group (see Total N) given in parentheses.
[a]Ratings of the subjects' satisfaction were made by the respondents.

7-10 Yrs and 3-5 Yrs) and "positive program" (24% and 26%), and "meets subject's needs" and "positive subject outcomes" for 1-2 Yrs subjects. The two responses for the former students with mild handicaps were in the same areas - "meets subject's needs" and "positive subject outcomes." Primary reasons for dissatisfaction across groups were "negative program," "negative influence of staff," and "doesn't meet needs."

Respondents also were asked whether they believed that the day programs were the most appropriate for the subjects. Responses here mirrored those given to the satisfaction item. The percentages believing that the program was the most appropriate were all above 75%. Reasons given for considering the program as most appropriate included the same primary ones given to the satisfaction items: meets subject's needs, positive program, and positive subject outcomes. When dissatisfaction was expressed, the primary reason was doesn't meet needs.

Information on who found the current day program is summarized in Table 22. A variety of roles was identified, yet across groups the social worker was predominant. School counselors also were noted with considerable frequency. When asked to identify why the current day program was chosen, the most frequently given responses were meets subject's needs, location, and only alternative. Most responses referred to positive aspects of the program rather than to location constraints or "only alternative."

The ways in which subjects find out about other opportunities for day programs are presented for each group in Table 23. Without rival, the primary source was social services (55% - 71%). For the 7-10 Yrs and 3-5 Yrs groups, the group home also was mentioned with some frequency (35%).

Respondents also were asked about the subjects' current participation in other day programs and whether they were on any waiting lists for day programs (see Table 24). In all groups, very few subjects currently attended another day program, and very few were on a waiting list. These responses support the finding of general satisfaction with their programs. Approximately one-third of the subjects had attended another program since high school. These were primarily subjects who had been out of school the longest (3-5 Yrs and 7-10 Yrs). As in their current programs, the primary type of program previously attended had been Day Activity Centers (DACs) (67% 7-10 Yrs, 64% 3-5 Yrs). When asked about why subjects had left the previous day programs, primary reasons given were an inappropriate program (22% 7-10 Yrs, 55% 3-5 Yrs), participation in graduation or a transition program (45% 3-5 Yrs), and the subject being too high functioning (33% 7-10 Yrs, 9% 3-5 Yrs). On the other hand, for the 1-2 Yrs group, the reasons were spread among skills deficit, inappropriate behavior, and transportation problems.

Living Arrangements

Several questions were asked about the subjects' living arrangements, with the focus being on current arrangements (number of residents, length of time, how found, satisfaction) and previous arrangements. Table 25 is a summary of current living arrangements for the subject groups. For the two groups that had been out of school the longest, the largest percentages of former students lived in supervised residential placements, followed by living with parents. Those former students who had been out of school 7 to 10 years more frequently lived in residential placements than did former students who had been out of school 3 to 5 years. Former students who had been out 1 to 2 years were divided almost equally between residential placements and living with

Table 22
Who Found Current Day Programs in Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Parent/Relative	2 (10%)	1 (3%)	1 (7%)	--
School Counselor	3 (15%)	2 (26%)	2 (14%)	1 (33%)
Social Worker	9 (45%)	14 (45%)	6 (43%)	2 (67%)
DVR-DRS	1 (5%)	--	--	--
Interdisciplinary Team	1 (5%)	--	--	--
Other	3 (15%)	7 (23%)	4 (29%)	--
Don't Know	1 (5%)	1 (3%)	--	--
Total N	20	31	14	3

Note: Entries are numbers of subjects, with percentages of those in day programs (see Total N) in parantheses.

Table 23
How Subjects Find Out About Other Opportunities for Day Program

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Work	2 (10%)	3 (10%)	1 (7%)	--
Group Home	7 (35%)	11 (35%)	--	--
Parents	1 (5%)	--	--	1 (33%)
Social Services	11 (55%)	17 (55%)	10 (71%)	2 (67%)
Professionals	1 (5%)	1 (3%)	1 (7%)	--
DVR	2 (10%)	1 (3%)	1 (7%)	--
Advocacy Agencies	--	4 (13%)	2 (14%)	--
Peers	2 (10%)	1 (3%)	--	--
School	--	2 (6%)	--	--
Other	3 (15%)	5 (16%)	3 (21%)	--
No Response	--	1 (3%)	--	--
Total N	20	31	14	3

Note: Entries are numbers of subjects, with percentages of those in day programs (see Total N) in parentheses.

Table 24
Participation in Other Day Programs and Presence on Waiting Lists for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Currently Attends Other Program	--	2 (6%)	1 (8%)	--
Previously Attended Other Program	9 (45%)	11 (35%)	2 (14%)	1 (33%)
On Waiting List	2 (10%)	4 (13%)	--	--
Total N	20	31	14	3

Note: Entries are numbers of subjects, with percentages of those in day programs (see Total N) in parentheses.

Table 25
Current Living Arrangements for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
With Parents	7 (26%)	16 (39%)	8 (42%)	3 (38%)
Foster Parents	--	1 (2%)	3 (16%)	--
With Friends	--	--	--	1 (13%)
Independently	1 (4%)	--	--	--
Apartment Trng	--	--	--	2 (25%)
Residential	18 (67%)	23 (56%)	7 (37%)	1 (13%)
Other	1 (4%)	1 (2%)	1 (5%)	1 (13%)
Total N	27	41	19	8

Note: Entries are numbers of subjects, with percentages of the group (see Total N) in parentheses.

parents, followed by living with foster parents. Only one former student, one who had been out of school 7-10 years, lived independently.

Information about those subjects living in supervised residential placements is provided in Table 26. The average numbers of residents with whom they lived was much higher for the 7-10 Yrs (30.1) and 3-5 Yrs (24.7) groups than for the 1-2 Yrs group (6.4) and for subjects with mild handicaps (8.3). Interestingly, the average number of weeks in residences was fairly similar across all groups, averaging about 350 weeks (or, about 7 years). The ranges in number of weeks were very large.

The respondents' views of the subjects' satisfaction with their living arrangements and the respondents' satisfaction are shown in Table 27. Overall, both subjects and respondents could be considered satisfied with their living arrangements. Only four of the subjects and only four of the respondents were considered to be not very satisfied or not at all satisfied with the current living arrangements.

Respondents also were asked whether they believed that the current living arrangement was the most appropriate one for the subject. The percentages believing that the arrangements were the most appropriate were: 68% for 7-10 Yrs, 86% for 3-5 Yrs, 100% for 1-2 Yrs, and 100% for subjects with mild handicaps. Reasons given for considering the living arrangement as most appropriate included meets subject's needs and positive program. Those respondents indicating the program was inappropriate most often indicated that it did not meet the subject's needs.

Information on who found the current living arrangements is summarized in Table 28. Clearly, the most frequently mentioned source across groups was social services (50% - 63%), followed by parents (14% - 50%). The most frequent reasons that respondents gave for the selection of the current living arrangements were good programs and meets subject's needs.

Respondents also were asked about the subjects' previous living arrangements and whether they were on any waiting lists for other living arrangements. Table 29 is a summary of these data. Time in previous living arrangements averaged about 750 weeks (14 years), but variability among individuals within groups was large. Relatively few of the subjects were on waiting lists for other living arrangements -- 22% of those who had been out of school 7 to 10 years, and 12% of those who had been out of school 3 to 5 years. Of these subjects, 40% in each group were on a list for an intermediate care facility. In the 7-10 Yrs group on waiting lists, 40% also were on a waiting list for a supervised living arrangements. Of the 3-5 Yrs subjects on waiting lists, 60% were on a waiting list for a supervised living arrangement. The average length of time that subjects had been on waiting lists was 30.2 weeks (SD = 42.2) for the 7-10 Yrs group and 153.6 weeks (SD = 153.2) for the 3-5 Yrs group.

When respondents were asked to indicate how subjects find out about other living arrangements, the majority indicated that subjects found out about new facilities through social services (65% for 7-10 Yrs, 43% for 3-5 Yrs) and the group home (32% for 7-10 Yrs, 40% for 3-5 Yrs).

Table 26
Information About Size and Duration of Residential Placements for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Number of Residents				
M	30.1	24.7	6.4	8.3
SD	38.7	31.2	0.5	6.1
Range	6-132	6-100	6-7	3-15
N	19	24	7	3
Weeks in Residence				
M	252.8	336.2	467.7	55.0
SD	220.7	271.7	300.7	--
Range	26-884	8-1300	108-988	--
N	18	23	6	1

Table 27
Satisfaction with Living Arrangements for Three Groups

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Subject's Satisfaction				
Very Satisfied	16 (59%)	34 (83%)	18 (100%)	6 (88%)
Somewhat Satisfied	8 (30%)	6 (15%)	--	1 (13%)
Not Very Satisfied	1 (4%)	1 (2%)	--	--
Not at All Satisfied	2 (7%)	--	--	--
Respondent's Satisfaction				
Very Satisfied	13 (52%)	30 (73%)	16 (89%)	3 (75%)
Somewhat Satisfied	9 (36%)	10 (24%)	1 (6%)	1 (25%)
Not Very Satisfied	3 (12%)	--	--	--
Not at All Satisfied	--	9 (2%)	--	--

Note: Entries are numbers of subjects, with percentages of the group (see Total N) in parentheses.

Table 28
Persons or Agency Finding Current Residential Facility

Who Found	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Social Service	12 (63%)	11 (50%)	4 (57%)	1 (50%)
Group Home	2 (11%)	3 (14%)	--	--
Institution	--	4 (18%)	--	--
Parents	4 (21%)	3 (14%)	2 (29%)	3 (50%)
Self	1 (5%)	--	--	--
Don't Know	--	1 (5%)	1 (14%)	--
Total N	19	22	7	2

Note: Entries are numbers of subjects, with percentages of those in each group in residential placements (see Total N) in parentheses.

Table 29
Information on Previous Living Arrangements and Waiting Lists

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Weeks in Previous Residence				
M	650.0	751.7	858.0	1106.8
SD	629.2	485.4	330.9	47.5
Range	26-1508	12-1248	624-1092	1046-1145
N	14	6	2	4
On Waiting List	6 (22%)	5 (12%)	--	--
How Found Out About Other Living Arrangements				
Social Services	13 (65%)	12 (43%)	5 (71%)	1 (50%)
Parents	6 (30%)	2 (7%)	--	--
Group Home	8 (40%)	9 (32%)	--	--
Friends/Peers	5 (25%)	3 (11%)	--	--
Other	6 (27%)	14 (48%)	3 (43%)	1 (50%)
Total N	20	28	7	2

Note: Entries for "Waiting List" are numbers of subjects in residential placements in each group, with percentages in parentheses. Entries for "How Found" are numbers of subjects in each group who did not indicate that they "didn't know" (see Total N), with

Family Relationships

None of the former students in this study had children. For those subjects who did not live with their parents or with foster parents, information was collected on whether they see or talk to relatives and which relatives are seen or talked to on a regular basis (see Table 30). Only the 1-2 Yrs group had less than 70% of subjects seeing or talking to their relatives, with only 57% having such contact on a regular basis. The relatives seen or talked to by most subjects on a regular basis were the mother, father, and sibling. Table 31 is a summary of how often subjects saw each relative. The mother and the father were mentioned most often for all subject groups for visits once per week, or more frequently.

Community Involvement

Respondents were also asked whether they were aware of any community programs or advocacy programs available to the subject. Results were tabulated separately for respondents who were family members and respondents who were working with the subject in a professional capacity. Several differences between the two were found. The percentages of respondents reporting that they were aware of community or advocacy programs were: 44% for 7-10 Yrs family and 94% for 7-10 Yrs professional; 29% for 3-5 Yrs family and 87% for 3-5 Yrs professional; 53% for 1-2 yrs family and 100% for 1-2 Yrs professional. Clearly, family members are considerably less informed than professionals about the availability of such services.

The ways in which respondents had learned about agencies that provide or could provide help also were examined for families and professionals. The responses of the 7-10 Yrs family group were evenly divided among social services, advocacy mailings, and other. In the 3-5 Yrs family group, most responses were in the "other" category; social services was the response for 22% of this group and day placement staff was the response for 11% of the group. For the 7-10 Yrs professionals, 27% indicated advocacy mailings and 27% answered "other." Group home or residence and social services were each the response of 20% of the 7-10 Yrs professional group. Most of the 3-5 Yrs professional group reported that they learned of agencies through the group home or residence (40%). Advocacy mailings was the response of 30% of this group. In the 1-2 Yrs family group, 29% reported that they found out about agencies through parents. Social services and advocacy mailings each were given by 43% of this group. Group home or residence was given by 14% of the group. For the subjects with mild handicaps, the one parent responded with group home or residence. The majority of the professional group (50%) gave no response to the question.

Friendships and Social Integration

Information on the former students' friends is included in Table 32. In all groups except the 1-2 Yrs group, the majority of subjects were considered to have friends. In the 1-2 Yrs group, only 42% of the subjects were identified as having special friends, compared to 67% to 88% for the other groups. When asked how many special friends the subjects had, respondents gave numbers that averaged from 2.8 (3-5 Yrs) to 6.2 (7-10 Yrs).

The friends of the former students were described by the respondents to a large extent as peer friends, ranging from 38% of the 1-2 Yrs group to 78% of the 7-10 Yrs group (see Table 32). Relatively few of the friends were described as staff from the subject's residence or volunteer/citizen advocates.

Table 30
Interactions (See or Talk to) With Family

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
See/Talk to Relative	20 (100%)	17 (71%)	4 (57%)	5 (100%)
Relative Seen or Talking To on Regular Basis				
Mother	20 (100%)	16 (84%)	4 (80%)	4 (80%)
Father	16 (80%)	12 (63%)	4 (80%)	3 (60%)
Sibling	16 (80%)	10 (53%)	4 (80%)	3 (60%)
Extended Family	7 (35%)	3 (16%)	--	1 (20%)
Step Parent	--	1 (5%)	--	--
Grand Parent	5 (25%)	--	1 (20%)	1 (20%)
Other Relative	--	--	--	--
Foster Parent	--	--	--	--

Note: Entries for "See/Talk to Relative" are numbers of subjects, with percentages based on those subjects who did not live with family or relatives. Entries for "Relative Seen" are numbers of subjects, with percentages based on "See/Talk" N. Percentages for "Relative Seen" may not total 100% because respondents could give multiple responses.

Table 31
How Often Relatives are Seen by Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Mother				
One Week or More	14 (70%)	7 (44%)	2 (50%)	1 (25%)
Once Per Month	1 (5%)	2 (13%)	--	3 (75%)
Several Times/Year	5 (25%)	3 (19%)	2 (50%)	--
Once Per Year	--	--	--	--
Total N	20	8	4	4
Father				
Onc Week or More	13 (81%)	8 (67%)	3 (60%)	1 (33%)
Once Per Month	--	--	--	1 (33%)
Several Times/Year	3 (19%)	2 (17%)	2 (40%)	--
Once Per Year	--	2 (17%)	--	1 (33%)
Total N	16	12	5	3
Sibling				
One Week or More	8 (50%)	2 (20%	--	1 (33%)
Once Per Month	3 (19%)	3 (30%)	--	1 (33%)
Several Times/Year	5 (31%)	3 (30%)	2 (100%)	1 (33%)
Once Per Year	--	2 (20%)	--	--
Total N	16	10	2	3
Extended Family				
One Week or More	1 (14%)	--	--	1 (100%)
Once Per Month	2 (29%)	1 (33%)	--	--
Several Times/Year	3 (43%)	--	--	--
Once Per Year	1 (14%)	2 (67%)	--	--
Total N	7	3	--	1
Grandparent				
One Week or more	--	--	--	1(100%)
Once per month	--	--	--	--
Several times/Year	1(100%)	--	1(100%)	--
Once per year	--	--	--	--
Total N	1	--	1	1

Note: Entries are numbers of subjects, with percentages (in parentheses) based on number who saw or talked to that relative (see Total N under each relative).

Table 32
Information on Friends for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Has Special Friends				
Yes	18 (67%)	31 (76%)	8 (42%)	7 (88%)
No	9 (33%)	10 (24%)	11 (58%)	1 (13%)
Total N	27	41	19	8
Number of Special Friends				
M	6.2	2.8	4.5	3.4
SD	5.4	2.0	3.7	2.1
Range	1-22	1-9	1-10	1-6
N	18	31	8	7
Description of Friends				
Peer Friend	14 (78%)	21 (68%)	3 (38%)	4 (57%)
Staff from Residence	2 (11%)	5 (16%)	--	1 (14%)
Volunteer or Citizen Advocate	4 (22%)	5 (16%)	3 (43%)	1 (14%)
Romantic Friend	7 (39%)	10 (32%)	--	1 (14%)
Current Teacher or Boss	--	1 (3%)	--	--
Other	4 (22%)	10 (32%)	2 (25%)	--
Has Regular Contact with Nonhandicapped Persons				
Yes	4 (15%)	4 (10%)	--	1 (33%)
No	23 (85%)	37 (90%)	19 (100%)	2 (67%)
Total N	27	41	19	3

Note: Entries for "Has Special Friends", and "Has Regular Contact..." are numbers of subjects, with percentages in parentheses based on Total N (note: only 3 in Contrast group responded to this item). Entries for "Description of Friends" are numbers of subjects, with percentages in parentheses based on the number indicated as having special friends. Percentages may not total 100% because respondents could give multiple responses.

Respondents also were asked about the subjects' social contact with nonhandicapped persons of the same age. Relatively few former students in each group were considered to have regular social contact with nonhandicapped persons who were not staff or family members. Only 15% or less of the subjects with moderate to severe handicaps, and less than 35% of the subjects with mild handicaps, had regular social contact with nonhandicapped persons. Those who did have regular contact generally met these people one or more times per month (primarily subjects in 7-10 Yrs and 3-5 Yrs groups) or one or more times per week (primarily subjects in 1-2 Yrs group and subjects with mild handicaps).

Leisure Activities

Respondents were asked to identify from a list of leisure activities those that the former students had participated in during the past seven days. The entire list of activities and the percentages of subjects participating in each for each group are shown in Table 33. Two activities were identified most frequently for all groups: watching TV or listening to the radio (98-100%) and sitting around resting (79-100%). Other frequent activities were shopping, going out to eat, and playing games, cards, or with toys. When asked to identify the activity that subjects spent the most time doing, watching TV/listening to the radio was most frequent for all groups. The average number of hours per week for which subjects were involved in watching TV or listening to the radio was 16.9 hours for 1-2 Yrs, and 10.0 hours for subjects with mild handicaps. The second most time activity, sitting around, took 9.0 hours for both the 7-10 Yrs and 3-5 Yrs groups, 9.3 hours for the 1-2 Yrs group, and 4.3 hours for subjects with mild handicaps.

For approximately three quarters of the subjects in each group (78% in 7-10 Yrs and 3-5 Yrs groups, 74% in 1-2 Yrs Group, and 75% of subjects with mild handicaps), respondents thought the subjects would like to participate in more activities than they do. Generally, the most frequently mentioned activities were participating in and attending sports events. Respondents also were asked to give a reason for the subject being unable to do an activity. For all groups, except the group of subjects with mild handicaps, the reason recorded most often was that there was no one who could take the subject to the activity (see Table 34). For subjects with mild handicaps, the most common reason recorded was lack of time. Several reasons were listed next in frequency: activity not available and lack of transportation for 7-10 Yrs; activity not available and lack of money for 3-5 Yrs; lack of money and social or behavioral problems for 1-2 Yrs; and lack of money for subjects with mild handicaps.

Citizenship

Three aspects of citizenship are presented in Table 35 for the four groups: registered voter, income tax payer, and problem with law or police. Considerable variation among groups was found in the frequency with which former students were registered voters, ranging from 7% of the 3-5 Yrs group to 11% of the 1-2 Yrs group to 33% of the 7-10 Yrs group to 63% of subjects with mild handicaps. The frequency with which subjects were taxpayers was considerably less for most groups. None of those in the 1-2 Yrs group paid taxes, and only 11% and 12% paid taxes in the 7-10 Yrs and 3-5 Yrs groups, respectively. One-quarter of the former students with mild handicaps paid taxes. For those who paid taxes all but one paid less than $100. The one subject who paid more (a person with mild handicaps) paid less than $500. (It should be noted that respondents did not know the amount of taxes paid for three of the former students.)

Table 33
Leisure Activities for Each Group

Activity	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Listen to Radio, Watch TV	27 (100%)	40 (98%)	19 (100%)	8 (100%)
Go Shopping	22 (81%)	31 (76%)	15 (79%)	6 (75%)
Do Hobbies	14 (52%)	19 (46%)	6 (32%)	2 (25%)
Do Sports	10 (37%)	10 (24%)	11 (58%)	5 (63%)
Attend Sports	5 (19%)	4 (10%)	1 (5%)	3 (38%)
See Movie, Play, Concert	13 (48%)	17 (41%)	8 (42%)	4 (50%)
Got to Party, Dance	6 (22%)	16 (39%)	1 (5%)	4 (50%)
Visit Friend	12 (44%)	20 (49%)	5 (26%)	6 (75%)
Go to Meeting	12 (44%)	13 (32%)	6 (32%)	2 (25%)
Go to Religious Service	14 (52%)	17 (41%)	8 (42%)	4 (50%)
Go Out to Eat	16 (59%)	24 (59%)	14 (74%)	7 (88%)
Go to Park, Walk	22 (81%)	30 (73%)	15 (79%)	6 (75%)
Play Cards, Games	11 (41%)	25 (61%)	14 (74%)	7 (88%)
Sit Resting	25 (93%)	15 (79%)	15 (79%)	8 (100%)
Other	9 (33%)	7 (37%)	7 (37%)	3 (38%)

Table 34
Why Subjects are Unable to Do These Activities by Each Group

Why Unable to do Activities	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Lack of Transportation	5 (24%)	1 (3%)	1 (7%)	--
Lack of Money	3 (14%)	8 (25%)	4 (29%)	2 (33%)
Activity not Available	5 (24%)	10 (31%)	2 (14%)	1 (17%)
Lack of Skill	2 (10%)	3 (9%)	1 (7%)	--
Lack of Time	--	4 (13%)	--	4 (67%)
Social or Behavior Problem	3 (14%)	3 (9%)	3 (21%)	1 (17%)
No one to Take Subject	8 (38%)	14 (44%)	8 (57%)	1 (17%)
Other	2 (10%)	3 (9%)	--	--
Medical/Physical Problem	3 (14%)	1 (3%)	--	1 (17%)
Total N	21	32	14	6

Table 35
Citizenship Characteristics of Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Registered Voter	9 (33%)	3 (7%)	2 (11%)	5 (63%)
Income Tax Payer	3 (11%)	5 (12%)	--	2 (25%)
Trouble with Law	3 (11%)	2 (5%)	--	--

Note: Entries are numbers of subjects in each group, with percentages in parentheses based on total numbers of subjects.

Use of Support Programs

The frequency with which the former students received Social Security Insurance (SSI), Disability Insurance Benefits, and other support is shown in Table 36. Only a few subjects were not receiving some kind of governmental support payment, except those subjects with mild handicaps (43% not receiving any governmental support payment). In the other groups, the majority of subjects received SSI. Many fewer former students were receiving disability payments, and they were only in the 7-10 Yrs and 3-5 Yrs groups. In each of the three groups of former students with moderate to severe mental retardation, about half of the subjects received other payments. Respondents other than parents almost totally expressed little knowledge of the amounts of support and weeks of support for the subjects, probably because many never saw the support payments. Because of the unreliability of their data, only data provided by parents on either the dollar amounts of support or weeks of support are provided in Table 36.

A small number of subjects had SSI benefits discontinued (15% or less in all groups). The primary reasons given for discontinued benefits were (a) benefit coverage changed because of death of parent, age of parent, or parent retirement, and (b) increased income changed benefits. Most of the former students (71% - 94% in four groups) had not had any previous benefits.

The frequency of use of Medicare, Medicaid, and food stamps is presented in Table 37. Medicaid was used most often, averaging 59% of the 7-10 Yrs group, 59% of the 3-5 Yrs group, 74% of the 1-2 Yrs group, and 57% of subjects with mild handicaps. Few former students (or the persons they were living with) received food stamps (less than 10% for subjects with moderate to severe mental retardation; 13% for subjects with mild handicaps).

Living Skills

Respondents were asked about several aspects of the subjects' living skills, including shopping, paying bills, banking, transportation, and telephoning. Information on financial living skills is summarized in Table 38. The majority of former students in all groups shopped for themselves (84%-100%), but most (except those with mild handicaps) did not pay the salesperson by themselves. While 63% of those with mild handicaps paid the salesperson, for the other groups only one-fourth (7-10 Yrs - 23%) to one-third (3-5 Yrs = 32%, 1-2 Yrs = 35%) did so. For those subjects who did not buy things on their own, a group home staff member or a family member usually helped the former student buy things.

Most subjects did not receive bills that they needed to pay. Only 13 subjects in 7-10 Yrs (50%), 14 subjects in 3-5 Yrs (52%), no subjects in the 1-2 Yrs group, and 3 subjects with mild handicaps (38%) received bills that they needed to pay. Of these, only 8% of those in the 7-10 Yrs group and only 33% of those with mild handicaps (both percentages reflect one student) paid their own bills. None of the subjects in 3-5 Yrs paid their bills. Those receiving help most often were helped by either a group home staff member and/or a family member.

The banking-related skills of subjects also are presented in Table 38. About half of the former students had savings accounts (46% - 63%), but relatively few of these used the accounts on their own (5% - 50%). Small percentages of former students had checking accounts (5% - 25%), and none of those who did used the checking accounts on

Table 36
Government Support Payments for Each Group

		7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Received Support[a]		26 (96%)	39 (98%)	19 (100%)	4 (57%)
SSI		17 (63%)	31 (77%)	17 (89%)	3 (43%)
Disability		6 (22%)	14 (37%)	--	--
Other		13 (48%)	17 (44%)	9 (53%)	2 (29%)
Amount of Support[b]					
SSI	M	146.78	103.48	269.00	96.33
	SD	142.44	121.64	96.84	110.82
	N	9	16	10	3
Disability	M	29.11	141.31	--	--
	SD	87.33	148.00	--	--
	N	9	16	--	--
Other	M	1.67	7.69	150.70	--
	SD	5.00	30.75	229.82	--
	N	9	16	10	--
Weeks of Support[b]					
SSI	M	383.4	321.4	186.3	139.7
	SD	153.1	144.9	137.0	107.0
	N	7	11	7	3
Disability	M	364.0	250.3	--	--
	SD	--	171.0	--	--
	N	1	9	--	--
Other	M	520.0	416.0	166.4	138.0
	SD	--	220.6	139.5	172.5
	N	1	2	5	2

[a]Entries are numbers of subjects, with percentages of those for whom the information was known (7-10 Yrs n = 27; 3-5 Yrs n = 40; 1-2 Yrs n = 19; Contrast n = 7). Percentages of subjects within each type of support are based on only those subjects for whom information was known.

[b]Information on amount of support and weeks of support is based only on the subjects for whom the respondent was the parent. The data from other respondents was considered unreliable.

Table 37
Use of Medicare, Medicaid, and Food Stamps by Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Medicare	2 (7%)	7 (17%)	3 (16%)	--
Medicaid	16 (59%)	24 (59%)	14 (74%)	4 (57%)
Neither	3 (11%)	3 (7%)	2 (11%)	2 (29%)
Food Stamps	--	3 (7%)	--	1 (13%)

Note: Entries are numbers of subjects, with percentages (in parentheses) based on Total N.

Table 38
Financial Skills in Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Shops for Self	26 (96%)	38 (93%)	16 (84%)	8 (100%)
Pays Salesperson	6 (23%)	12 (32%)	6 (35%)	5 (63%)
Pays Bills (if get[a])	1 (8%)	--	--	1 (33%)
Has Savings Account	17 (63%)	19 (46%)	9 (47%)	4 (50%)
Uses Savings Account by Self	4 (24%)	1 (5%)	1 (11%)	2 (50%)
Has Checking Account	5 (19%)	6 (15%)	1 (5%)	2 (25%)
Uses Checking Account by Self	--	--	--	--

Note: Entries for first two items are numbers of subjects, with percentages based on the total number in each group.
[a]Percentages based on the numbers in each group who received bills (Retro 8-10 = 13, Retro 3-5 = 14, Prospective = 0, Mild = 3
[b]Entries for the "Has" items are numbers of subjects, with percentages (in parentheses) based on the total number in each group. For the "Uses" items, percentages are based on the numbers in the "Has" items.

their own. Help with savings accounts was provided by the group home staff (for over 60% in all groups) or a family member (for less than 40% in all groups). Help with checking accounts also was provided by the group home (for over 70% in all groups) or by a family member (for less than 30% in all groups).

Transportation and telephone skills information is shown in Table 39. The three groups of former students with moderate to severe handicaps all had the greatest percentages relying on special transportation in a van, car, school bus, or special bus (56% 7-10 Yrs, 56% 3-5 Yrs, 53% 1-2 Yrs). For these groups, the next most frequently used transportation was being driven by a parent, friend, or houseparent (22% 7-10 Yrs, 22% 3-5 Yrs, 26% 1-2 Yrs). A public bus also was used by 22% of those in the 7-10 Yrs group, and smaller percentages of those in the 3-5 Yrs (17%) and 1-2 Yrs (5%) groups. Walking or biking was noted for few in these groups (0% - 16%). For former students with mild handicaps, the most common transportation was a public bus. All other forms of transportation were used by one person only, including driving self. When asked whether the subject had a driver's license, an affirmative response was given for only two subjects, both of whom were subjects with mild handicaps.

Telephoning skills, as indicated by the ability to dial the telephone, ranged from 100% of the subjects with mild handicaps to 81% of the 7-10 Yrs group, to 56% of the 3-5 Yrs group, to 47% of the 1-2 Yrs group. Those who needed help in the 7-10 Yrs group were helped primarily by group home staff (80%) and work staff (20%). Those in the 3-5 Yrs group needing help were assisted primarily by the group home staff (77%) or the family (23%). Former students in the 1-2 Yrs group were helped primarily by the family (80%), then the group home (20%).

ICAP Results

Results from administering the Inventory for Client and Agency Planning (ICAP) provided information on subjects' functional limitations, adaptive behavior, problem behaviors, and service level needs. ICAP information was obtained for all subjects except one person in the 7-10 Yrs group.

Functional Limitations

Information related to functional limitations for the subjects at the time of follow-up are summarized in Table 40. All but one subject was able to walk. Three had "blindness" or "deafness" as a diagnosis in addition to mental retardation. Most had either no seizures or controlled seizures. For the majority of former students, medical care needs were relatively infrequent (less than monthly care required by from 73% to 100% of a group). Those with more frequent medical needs tended to be in the 7-10 Yrs and 3-5 Yrs groups. Approximately half of the subjects in each group did not require any regular medication. These findings indicate that members of the sample had relatively good mobility and health, and displayed few secondary disabilities.

Adaptive Behavior

Table 41 is a summary of selected ICAP items that reflect common functional behaviors, generally increasing in level of complexity going down the list in the table. Across all groups, the first six behaviors are shown by most of the former students in each group. The last four behaviors are shown by less than 25% of the former students in each group except the group of former students with mild handicaps, which approaches

Table 39
Transportation and Telephone Skills in Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Transportation Used				
Driven by Parent, Friend, Houseparent	6 (22%)	9 (22%)	5 (26%)	1 (13%)
Van, School Bus, Special Bus	15 (56%)	23 (56%)	10 (53%)	1 (13%)
Public Bus	6 (22%)	7 (17%)	1 (5%)	4 (50%)
Walk or Bicycle	--	2 (5%)	3 (16%)	1 (13%)
Drive Self	--	--	--	1 (13%)
Has Driver's License	--	--	--	2 (25%)
Dials Telephone	22 (81%)	23 (56%)	9 (47%)	8 (100%)
Total N	27	41	19	8

Table 40
Functional Limitations in Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Mobility				
Non-ambulatory	--	1 (2%)	--	--
Walks	26 (100%)	40 (98%)	19 (100%)	8 (100%)
Sensory Impairments				
Blindness	1 (4%)	--	--	--
Deafness	1 (4%)	1 (17%)	--	--
Seizure Frequency				
Weekly or more	--	1 (2%)	2 (11%)	--
Monthly	--	--		2 (25%)
None or controlled	26 (100%)	40 (98%)	17 (89%)	6 (75%)
Medical Care Needs				
Immediate access	2 (8%)	--	--	--
Daily	--	2 (5%)	--	--
Weekly	3 (12%)	1 (2%)	--	--
Monthly	2 (8%)	2 (5%)	2 (11%)	--
Less than Monthly	19 (73%)	36 (88%)	17 (89%)	8 (100%)
Prescribed Medication				
For epilepsy	1 (4%)	1 (17%)	7 (37%)	2 (25%)
For mood, sleep, behavior	2 (8%)	4 (10%)	3 (16%)	--
For health	5 (19%)	10 (24%)	3 (16%)	--
For other reason	7 (27%)	7 (17%)	2 (11%)	2 (25%)
None	14 (54%)	19 (46%)	9 (47%)	4 (50%)

Note: Entries are numbers of subjects, with percentages of the group in parentheses. Percentages under Prescribed Medication may not total 100 because more than one reason could be designated for a single subject.

Table 41
Percentages Able to do Selected Behaviors Fairly Well to Very Well

Behavior	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Imitates actions	25 (96%)	41 (100%)	19 (100%)	8 (100%)
Says 10 words	25 (96%)	40 (98%)	14 (74%)	8 (100%)
Independent toileting	25 (96%)	41 (100%)	18 (95%)	8 (100%)
Says 3-4 word sentences	25 (96%)	36 (88%)	13 (68%)	8 (100%)
Dresses self completely	26 (100%)	37 (90%)	17 (89%)	8 (100%)
Crosses street alone	20 (77%)	20 (49%)	10 (53%)	7 (88%)
Purchase/count $5 change	1 (4%)	7 (17%)	1 (5%)	5 (62%)
Writes notes/letters	3 (12%)	6 (15%)	4 (21%)	6 (75%)
Budgets money for week	3 (12%)	7 (17%)	4 (21%)	2 (25%)
Plans and prepares meals	4 (15%)	6 (15%)	1 (5%)	5 (62%)
Motor Skills				
M	472	473	463	504
SD	21.8	27.9	25.7	29.5
Range	424-507	411-534	431-518	450-534
Social/Communication Skills				
M	473	472	465	513
SD	17.9	20.9	32.6	30.1
Range	434-505	423-537	421-555	476-555
Personal Living Skills				
M	499	494	490	520
SD	15.3	20.4	21.3	26.0
Range	467-531	452-545	449-537	484-557
Community Living Skills				
M	476	471	468	510
SD	18.4	26.4	26.2	17.8
Range	438-530	416-533	435-515	497-544
Broad Independence Score				
M	480	478	471	512
SD	15.0	20.4	23.3	23.9
Range	448-514	432-515	441-510	482-548
Age Equivalent (years-months)	7-6	7-3	6-5	12-3

Note: Entries are numbers of subjects, with percentages of the group in parentheses.

the 25% figure only for the item on budgeting money for the week. The sample members mostly possessed independent toileting and dressing skills, and possessed basic rudimentary oral language skills. Some indication of needed support is evident in travel skills (e.g., crossing streets). Substantial limitations in skills are evident in managing money, written communication, and planning and preparing meals. Minimal differences seem to exist in the listed adaptive behaviors for the three groups of former students with moderate to severe mental retardation.

Domain scores on the ICAP (Motor Skills, Social/Communication Skills, Personal Living Skills, Community Living Skills) indicate overall performance in these focused areas. The ICAP's Broad Independence Score reflects performance on all items in the adaptive behavior section. These values, along with derived age-equivalent scores, also are shown in Table 41. Although the older sample generally showed higher skill levels, there were minimal differences in overall performance among the three groups with moderate to severe mental retardation. Clear differences are evident for subjects with mild handicaps compared to the three groups of former students with moderate to severe retardation. However, the range of performance was quite broad for persons in the samples with moderate to severe retardation, with some persons equaling or exceeding the scores of persons in the sample with mild retardation. Analysis of variance to compare the three groups with moderate to severe mental retardation did not reveal any significant differences among 7-10 Yrs, 3-5 Yrs, and 1-2 Yrs groups on the four skill areas (motor, social/communication, personal living, community living) or on the Broad Independence Score.

Problem Behavior

Table 42 is a summary of selected ICAP items that reflect maladaptive behaviors, generally decreasing in level of complexity going down the list in the table. Also shown for each group is the average score for the group on the General Maladaptive Index. Subjects with mild handicaps did not exhibit any of the maladaptive behavior at a moderately serious level. All other groups did, although within each group at least one person did not exhibit any. The 3-5 Yrs group appears to have a somewhat greater frequency of problems, with at least 20% of that group having problems on five of the eight items in Table 42. The comparable numbers of items for the 7-10 Yrs and 1-2 Yrs groups are one item and two items, respectively. Thus, the three groups of subjects with moderate to severe retardation were approximately one standard deviation below the mean in maladaptive behavior scores. Although some subjects displayed extreme scores, the vast majority showed few serious excess behaviors. An analysis of variance for the three groups with moderate to severe mental retardation did not reveal any statistically significant differences.

Service Level

The ICAP provides a score, ranging from 1 (total care/support) to 9 (independent), that summarizes the level of projected service needs for a client; the Service Level Score reflects the extent to which a person needs care, support, and supervision. This measure represents a weighted combination of overall adaptive and maladaptive scores, based upon extensive statistical studies (Bruininks et al., 1986). The service scores and the percentages of former students in each group falling at each service level are shown in Table 43. Other than the obvious difference between the subjects with mild handicaps and the other three groups, there also appears to be a discrepancy between the 7-10 Yrs group compared to the 3-5 Yrs and 1-2 Yrs groups. The latter two groups have subjects

Table 42
Percentages with Moderately Serious Problems on Maladaptive Behaviors

Behavior	7-10 Yrs	3-5 yrs	1-2 Yrs	Contrast
Hurts self	1 (4%)	5 (12%)	2 (10%)	--
Hurts others	2 (8%)	5 (12%)	2 (10%)	--
Damages property	1 (4%)	4 (10%)	2 (10%)	--
Disruptive	2 (8%)	10 (24%)	5 (26%)	--
Unusual/repetitive	4 (15%)	8 (20%)	3 (7%)	--
Socially offensive	5 (19%)	9 (22%)	4 (21%)	--
Withdrawn or inattentive	4 (15%)	9 (22%)	2 (10%)	--
Uncooperative	7 (27%)	11 (27%)	3 (7%)	--
General Maladaptive Index				
M	-8	-12	-11	-2
SD	9.3	13.1	12.9	1.6
Range	-34 to 0	-58 to 0	-47 to 0	-4 to 0

Note: Entries are numbers of subjects, with percentages of the group in parentheses.

Table 43
ICAP Service Levels for Each Group

	7-10 Yrs	3-5 Yrs	1-2 Yrs	Contrast
Service Level				
1-total care/support	--	--	--	--
2	--	1 (2%)	1 (5%)	--
3-extensive care/support	--	1 (2%)	1 (5%)	--
4	--	5 (12%)	3 (16%)	--
5-regular care/support	7 (27%)	9 (22%)	4 (21%)	--
6	6 (23%)	5 (12%)	2 (10%)	--
7-limited care/support	9 (35%)	10 (24%)	3 (16%)	2 (25%)
8	3 (12%)	9 (22%)	5 (26%)	4 (50%)
9-independent	1 (4%)	1 (2%)	--	2 (25%)
Service Score				
M	69	65	62	87
SD	10.6	15.6	18.6	7.7
Range	52-92	28-90	24-88	77-98

Note: Entries are numbers of subjects, with percentages (in parentheses) based on the total number of subjects.

covering a much greater range of service levels, with both having at least 15% requiring more than regular care or support. On the other hand, the percentages of subjects requiring less than limited care or support was 16% for the 7-10 Yrs group, 24% for the 3-5 Yrs group, and 26% for the 1-2 Yrs group (75% for subjects with mild handicaps). In the three groups of former students with moderate to severe retardation, only two students (in 7-10 Yrs and 3-5 Yrs groups) received service level scores indicating the possibility of independent living. The calculated average service level for each group of subjects with moderate to severe retardation, based on the average service score, was 6. Thus, these samples showed rather extensive need for care, support, and supervision. For subjects with mild handicaps, the average service score translates to level 8, which is between limited care or support and independent living. A finding of interest is the number of persons with service scores on the ICAP expressing greater degrees of independence and less needs for support than would have been predicted by their intellectual and special education service classification alone.

Group Comparisons

The extensive data obtained in this study made possible many types of comparisons. For purposes of the Post-School Transition Study, three major group comparisons were targeted:

(1) Comparisons of post-school outcomes as a function of the time that the former students with moderate to severe mental retardation had been out of school (7-10 years vs 3-5 years vs 1-2 years).

(2) Comparisons of post-school outcomes as a function of the gender of the former students with moderate to severe retardation.

(3) Comparisons of post-school outcomes as a function of the severity of handicap of the former students with mental retardation (moderate vs severe).

In addition to these group comparisons, correlational analyses were conducted to examine relationships between information obtained from the ICAP about personal competence and information obtained from the project interview about post-school outcomes.

Time Out of School Comparisons

Most of the group comparisons based on the number of years the former students with moderate to severe mental retardation had been out of school were not statistically significant. While no differences were found among the groups in most employment-related variables, an expected difference was found in the average number of weeks the former students had been at their current jobs, $F(2,32) = 5.03$, $p < .013$, with the 7-10 Yrs group having their jobs longer, on the average (216.7 weeks), than either the 3-5 Yrs group (116.6 weeks), or the 1-2 Yrs group (46.6 weeks). In addition, the type of job was found to differ by groups, $x^2(6) = 15.85$, $p < .015$. The primary differences in the types of jobs could be accounted for by the percentages in each group with regular jobs: 7-10 Yrs = 33%, 3-5 Yrs = 5%, 1-2 Yrs = 12%. Information on support payments (just for those with parents as respondents) indicated that individuals out of school just 1-2 years were more dependent upon SSI payments than individuals out longer, $F(2,32) = 5.85$, $p < .01$, and also on other types of payments, $F(2, 32) = 4.92$, $p < .05$. Greater amounts in disability payments were received by individuals out of school 3-5 years compared to the other groups, $F(2, 32) = 5.97$, $p < .01$.

One item in the area of friendships indicated a significant difference among groups. When looking only at the responses for subjects said to have special friends, the number of friends differed among the groups, $F(2,54) = 4.93$, $p < .011$. Post-hoc comparisons indicated that the 7-10 Yrs group (6.2) had a greater average number of friends than did 3-5 Yrs group (2.8). Neither group was statistically different from the 1-2 Yrs group (4.5). An additional analysis that looked at number of friends as a function of living arrangement (for the total sample, and divided by years out of school) did not reveal significant differences.

In looking at family relationships, another variable revealed significant differences among the three groups. For the former students who were not living with their parents or other relatives, the numbers who saw or talked to their relatives varied significantly as a function of group, $x^2(2) = 10.39$, $p < .006$, from 50% for the 1-2 Yrs group ($n = 8$), to 70% for the 3-5 Yrs group ($n = 24$), to 100% for the 7-10 Yrs group ($n = 20$).

Leisure activities generally did not distinguish the three groups. On one variable, however, differences did emerge, $x^2(2) = 7.97$, $p < .019$. Students with moderate to severe disabilities who had been out of school only 1-2 years went to parties or dances with much less frequency (5%) than did those out of school 3-5 or 7-10 years (39% and 22%).

One citizenship variable also revealed a statistically significant difference among the groups. For the numbers of registered voters, $x^2(2) = 8.72$, $p < .013$, many more of the former students out of school 7-10 years (33%) were identified than those out of school either 3-5 years (7%) or 1-2 years (10%).

One variable related to financial independence also indicated significant differences among groups based on number of years out of school. When asked about who pays bills that come to the former student, $x^2(4) = 14.53$, $p < .006$, most indicated that the former student does not get bills: 7-10 Yrs = 50%, 3-5 Yrs = 66%, 1-2 Yrs = 100%. The 7-10 Yrs and 3-5 Yrs groups indicated that the former student gets bills and that someone else helps pay them (46% and 34%, respectively). Only for one person with moderate to severe retardation, a person in the 7-10 Yrs group, was it indicated that the former student paid bills independently.

Gender Comparisons

Differences between male and female former students with moderate to severe mental retardation essentially did not exist in the current sample. The only statistically significant difference on the examined variables emerged for the number of weeks at the current job, which was 179.8 for female former students and 69.70 for male former students, $F(1,33) = 8.30$, $p < .007$. This difference, however, is confounded with the distribution of subjects, with more males in the 1-2 Yrs group, more females in the 3-5 Yrs group, and approximately equal numbers in the 7-10 Yrs group. Only one other difference even approached significance, the difference for how purchases are paid, $x^2(1) = 5.12$, $p < .024$. A greater percentage of male former students paid for their purchases on their own (42%) than did female former students (17%).

Severity of Handicap Comparisons

Former students were divided into two groups according to the severity level of their mental retardation (either moderate or severe), as defined previously in the Method section. The distribution of males and females in the two groups was dissimilar (Moderate group N = 41: 59% female, 41% male; Severe group N = 46: 43% female, 57% male). The primary differences in outcomes that were identified between the two groups were for one employment variable and two variables related to living skills.

The only employment variable on which a significant difference was found was whether the former student had ever been unemployed, $x^2(2) = 8.41$, $p < .015$. The percentages of subjects who had been unemployed at some point since leaving school were 56% of those with moderate mental retardation and 27% of those with severe mental retardation. As noted in the Discussion, this difference may reflect differences in interpretation by respondents.

The former students' transportation skills, as reflected in how they got to places, also showed significant differences as a function of severity of handicap, $x^2(3) = 17.39$, $p < .001$. Those former students with moderate mental retardation tended to ride a public bus, walk, or ride a bike (41%) with greater frequency than those with severe mental retardation (4%); and, those with severe retardation tended to be driven or get picked up by a special van or bus (96%) with greater frequency than those with moderate retardation (58%). Further, a difference was found in the frequency of former students who were able to dial a phone (for emergencies, to talk to friend, etc.), $x^2(1) = 12.00$, $p < .001$. More former students with moderate retardation did so (83%) than former students with severe retardation (44%).

Differences on two other variables approached significance: the numbers of former students who played cards, games, or with toys, $x^2(1) = 3.60$, $p < .058$, and the numbers of former students not living at home or with relatives who had regular contact with their fathers, $x^2(1) = 4.75$, $p < .030$. In both cases, former students with severe mental retardation had greater numbers (69% played cards, 88% had regular contact with fathers) compared to former students with moderate retardation (46% played cards, 53% had regular contact with fathers).

Correlations Between Personal Competence and Outcomes

Possible relationships between certain personal competence variables measured on the ICAP and post-school outcomes were examined by forming several composite outcome variables. These variables were derived from extensive factor analytic studies of coded personal competence and post-school outcome variables by Bruininks, McGrew, Thurlow, and Lewis (1988). They are summarized in Table 44. Each of the post-school interview composite outcome variables was correlated with 12 ICAP scores: (a) Internalized Maladaptive Behavior Index, (b) Asocial Maladaptive Behavior Index, (c) Externalized Maladaptive Behavior Index, (d) General Maladaptive Behavior Index, (e) ICAP Service Score, (f) ICAP Service Level, (g) Broad Independence Domain Score, (h) Motor Domain Score, (i) Social Domain Score, (j) Personal Domain Score, (k) Community Domain Score, and (l) total number of problem behaviors. For both the interview composite items and the ICAP items, higher scores reflect higher levels of adaptive behavior (and fewer problem behaviors). The Pearson correlations are displayed in Table 45.

Table 44
Composite Variables from Project Interview

Composite Variable	Components
Daytime Independence (DI) M = 3.2 SD = 1.2 Range = 1-7	Scale developed from two interview items and one ICAP item: 1 = No formal daily program 2 = Day care 3 = Day or Work Activity Center 4 = Sheltered Workshop 5 = School or volunteer work 6 = Supervised or supported on-site job placement 7 = Competitive employment
Supported Payments (SP)[a] M = 166.89 SD = 182.64 Range = 0-947.00	$/month from SSI + Disability + Welfare + Other
Residential Independence (RI) M = 3.0 SD = 182.64 Range = 0-5	Living arrangement information put on continuum scale: 1 = Institution, hospital, nursing home 2 = Group residence 3 = Living with family or relatives 4 = Apartment training or halfway house 5 = Living with friends, spouse, or alone
Number of Friends (NF) M = 2.7 SD = 3.7 Range = 0-22	Count number, including none
Variety of Friends (VF) M = 1.0 SD = 1.0 Range = 0-4	Scale developed by adding friends identified as: Peer friend + Residence Staff Friend + Teacher/boss Friend + Romantic Friend + Other Friend
Leisure Participation (LP) M = 7.9 SD = 2.2 Range = 3-13	Scale developed by adding activities participated in during past seven days (up to 15 possible)

[a]This variable should be viewed with some caution since it is based on respondents' estimates of payments; in many cases, respondents were guessing because they never saw the checks.

Table 45 indicates that 30 out of 84 correlations were statistically significant between measures of personal characteristics and outcome measures. Interestingly, the largest number and highest correlations were obtained between personal characteristics and friendship-leisure outcome measures.

Measures of independence, reflected in the Motor, Social, Personal, and Community scales (and, of course, the resulting Broad Independence Scale), correlated significantly with several outcome measures, including friendships (number and variety), leisure activity participation, and annual income. Asocial maladaptive behavior was another ICAP score that correlated significantly with several interview composite variables: the correlations were positive for support payments received and residential independence (i.e., fewer problem behaviors - better behavior - with more income from supported payments, and with more independent living arrangements), and negative for number and variety of friends (i.e., more problem behaviors with lower average numbers of friends). However, these correlations were rather low. The ICAP service score, a combined measure of adaptive behavior and fewer problem behaviors, correlated positively with income. It is evident that, while these measures of personal competence are predictive of post-school outcomes, there are many other factors such as opportunity, and community and personal support associated with employment and social and community participation.

Discussion

Several recent studies of the post-school status of students with moderate to severe handicaps have indicated that these former students reach moderate levels of employment up to five years after leaving public school special education programs. The extent to which levels of employment change as a function of time out of school, particularly for periods exceeding five years, is unknown from these previous studies. Based on available information, such as the Edgar (1987) one-year out of school finding that 29% are employed, and the Hasazi et al. (1985) up to five-years-out finding that 30% are employed, it might be expected that little difference would be found in employment rates as the number of years out of school increased. Comparisons to previous studies on other outcome variables, such as financial and social integration, cannot be assessed because few studies have used the same kinds of measures, other than those related to employment.

Information collected in the current study provides data that can be used to address the issue of changes in post-school status as a function of years out of school for students educated in the same school system. Comparisons of former students one to two years out of school, three to five years out of school, and seven to ten years out of school revealed few differences in employment-related variables, as well as in other "quality-of-life" variables. Those differences that were found often seemed to be related to the characteristics of the students in the groups, or perhaps the program in which they were enrolled, rather than their time out of school. Outcomes for the group of students out of school three to five years suggest this, with a smaller percentage of these students engaged in regular jobs (5%) than students in the other two groups (13% and 33%). Yet, this 3-5 Yrs group was similar to the other two groups of students with moderate to severe handicaps in overall employment rate (46% compared to 33% and 42%) and in most indices of personal competence, although it appeared to have a somewhat greater incidence of maladaptive behavior. It may also be that changes that have occurred in school programs for these students in recent years have contributed to bringing the most recent program participants up to a level similar to that of individuals

Table 45
Pearson Correlation Coefficients Between Selected ICAP and Project Interview Scores

	Interview Scores[a]						
ICAP Scores[b]	DI	SP	RI	NF	VF	LP	INC
Int Mal	.142	.194	.251**	-.009	-.132	-.087	.245
Asoc Mal	-.005	.286**	.208*	-.234*	-.331***	-.126	.131
Ext Mal	.070	.113	.088	-.022	-.200*	-.074	.282
Gen Mal	.078	.192*	.175	-.090	-.250**	-.100	.256
IServSc	.160	.070	.119	.128	.070	.099	.368*
IServLev	.157	.062	.134	.097	.042	.031	.336*
BInd	.165	-.088	-.021	.309**	.403***	.289**	.149
Motor	.086	-.061	-.034	.204*	.379***	.291**	.287
Soc	.135	.026	-.022	.288**	.282**	.102	.236
Pers	.156	-.229*	-.056	.321***	.392***	.342***	.531***
Comm	.203*	-.063	.030	.261**	.327***	.263**	.364*
TotProb	-.078	-.244*	-.270**	.054	.175	.119	.269

Note: Ns for all correlations except those with INC are 86; for INC correlations, Ns are 33. * $p < .05$; ** $p < .01$; *** $p < .001$.

[a]Interview scores are for: DI=Daytime Independence, SP = Supported Payments, RI = Residential Independence, NF = Number of Friends, VF = Variety of Friends, LP = Leisure Participation, INC = Income per year.

[b]ICAP scores are for: Int Mal = internalized maladaptive behavior index, Asoc Mal = asocial maladaptive behavior index, Ext Mal = externalized maladaptive behavior index, Gen Mal = general maladaptive behavior index, IServ Sc = ICAP Service score, IServ Lev = ICAP service level, BInd = broad independence domain score, Motor = motor domain score, Soc = social domain score, Pers = personal domain score, Comm = community domain score, TotProb = total number of problem behaviors.

who have been out of school for many years and who have had the advantage of additional training and time to secure more independent jobs and achieve greater independence. (Appendix A summarizes a preliminary analysis of program influences.) The cross-sectional approach used in this study obviously makes it difficult to draw conclusions about how time out of school actually influences outcomes for individual students. With the cross-sectional approach, possible sample differences, as well as experiential and contextual differences, confound the effects of time with post-school outcomes. While such an approach clearly is easier and less costly than a longitudinal approach, the latter clearly is more desirable for answering questions about how outcomes change as a function of time out of school. This issue will be assessed with these and other samples through a longitudinal design in future studies.

There was some trend toward greater community participation and assimilation for older samples (7-10 Yrs). These trends are somewhat difficult to interpret because the 3-5 Yrs group did not differ in these areas from the 1-2 Yrs group. The failure to find many differences on post-school employment and income outcomes with years out of school is not entirely surprising since previous studies have documented that long-term job-maintenance for individuals with mental retardation requires continued support and re-training (Ford & Dineen, 1984). While it is possible that more recent school programs have produced more positive outcomes than earlier programs, the failure of the older age cohorts to achieve more positive outcomes may also reflect deficiencies in adult service programs and transition from school support services. Lack of support services for young adults with severe handicaps is cited frequently as a problem by parents, school personnel, and adult service providers (Calkins, Walker, Bacon-Prue, Gibson, Martinson, & Offner, 1985; Edgar, Horton, & Maddox, 1984; McDonnell & Hardman, 1985). Determining the reasons for these differential outcomes of former students is clearly an important area for future research, and for the evaluation of current service practices.

Several of the significant correlations found between measures of personal competence and composite outcome measures, however, reinforce the notion that post-school outcomes are related to personal competence variables, particularly measures of independence or adaptive behavior and to some extent, maladaptive behaviors. Such findings, of course, are in accord with previous research studies that have documented that deficiencies in social skills are frequently primary factors in the failure of many individuals with handicaps to achieve successful integration into community and work settings (e.g., Brickey, Campbell, & Browning, 1985; Bruininks, 1982; Bruininks, Thurlow, & Gilman, 1987; Holman & Bruininks, 1985). These findings do not suggest, however, that personal competencies in adaptive behavior and absence of problem excess behaviors place some arbitrary limit on the prospects for future adjustment. Growth in these behavioral areas is definitely possible through carefully structured training, opportunity, and support (Holman & Bruininks, 1985; Larson & Lakin, 1989; Liberty, 1985).

A number of studies (see Fardig et al., 1985; Hasazi et al., 1985; Kranstover et al., in press; Mithaug, Horiuchi & Fanning, 1985) also have pointed to possible differential post-school outcomes for males and females. For example, Fardig et al. found males fared better than females on an "Employment Training Index" used to compare students by employment history and overall employment status. Hasazi et al. found that gender was related significantly to employment status, with 66% of the males employed compared to 33% of the females. Mithaug et al., similarly found differences in employment rates favoring males. Kranstover et al. in addition found that males worked an average of five hours longer per week, and earned more money both by the hour and per year than females. In each of the previously cited studies, however, the samples were former

students with mild handicaps. A more positive outlook was found for gender on outcome measures for the current sample of former students with moderate to severe degrees of mental retardation, not only in financial outcomes but in social outcomes as well (e.g., number of close friends, involvement in interactive activities). In the present study, for the sample of former students with moderate to severe handicaps, there were few differences identified between the males and females. Whether the lack of differences is due to the group's severity of handicap, or to the nature of the school program, or the limited employment outcomes, or to confounding with other variables, cannot be determined here. Clearly, further study, preferably of a longitudinal nature, is required to assess this issue.

Severity of handicap was another variable of interest in the present investigation. Although an attempt was made to include a contrast group of former students with mild handicaps, it was done with minimal success. The representativeness of this contrast group is highly questionable, with outcomes probably much above those of the individuals with mild handicaps who could not be found or who refused to participate. With this in mind, it is interesting to note that nearly 90% of former students with mild retardation were employed. It seems plausible to guess that the actual rate, if all identified students had participated, might be somewhere between 65% and 80%. This rate of employment is comparable to that found for students with mild mental retardation in a suburban school district in the same metropolitan area (see Bruininks, Thurlow, Lewis, & Larson, 1988).

For the former students with moderate to severe mental retardation, comparisons of those with moderate retardation and those with severe retardation revealed only a few statistically significant differences. These were found for unemployment in the past, transportation skills, and telephoning skills. On the unemployment variable, individuals with severe mental retardation showed significantly lower rates of ever having been unemployed. It is possible that this difference reflects the viewpoint of the respondents that time without a job was not "unemployed" time because they were "not supposed to be working." On the two living skills variables, individuals with moderate mental retardation showed significantly higher rates of higher level skills.

The overall employment rates for the two groups were not significantly different from each other, and were similar to those typically reported in the literature for these groups. For example, both Edgar (1987) and Hasazi et al. (1985) reported rates of about 30% for individuals with severe mental retardation. Edgar and Levine (1986) reported a rate of about 39% for individuals with severe handicaps. The sample with severe mental retardation in this study reported a 29% level of employment. For individuals with moderate mental retardation, the employment rate was 54%. The higher employment rate for this group undoubtedly reflects regional economic and perhaps services differences. Employment for all young adults between the ages of 20 and 24 in the metropolitan area in which the study was conducted was 76% in 1980. It may also reflect aggressive efforts in the state of Minnesota to provide supported employment opportunities for people with disabilities.

Assessing the post-school employment status of persons with mental retardation, through direct surveys or comparisons with other reports, poses particular problems. Many persons in this example were employed with support in competitive and sheltered settings. Often, such jobs are subsidized by rehabilitation and other service agencies. The definition and meaning of employment clearly requires refinement to assist in assessing the community adjustment of persons with mental retardation, and to provide more effective means for synthesizing results across studies.

There are few widely accepted norms for assessing the outcomes and adjustment of adults in our society. While judgments in this area are obviously guided both by facts and personal viewpoints, we do not believe the results of this study favor a highly optimistic interpretation. While judged as exhibiting moderate to severe intellectual disabilities, this sample appeared to possess significant personal resources and competencies in health, mobility, personal care, as well as general absence of severe problem behaviors. Furthermore, the range of performance in these areas was particularly broad. Juxtaposed to this picture is a portrait of substantial dependency in employment, income and community living skills. While there is reason for satisfaction and pride with services and supports from this study, the predominant message is that our schools, agencies and communities can do better to enhance the productivity and independence of persons with mental retardation. Closing the obvious gap between the resources and reality of community living represents a serious challenge for policy makers, researchers, service providers and consumers.

Assessing Post-School Outcomes

One objective of the Post-School Project was to develop measures and strategies for schools to use is assessing the outcomes of former students with handicaps. Research activities in support of this objective are reported by Lange et al. (1988) and Bruininks, McGrew, Thurlow, and Lewis (1988). The study by Lange et al. (1988), described earlier in this report (Method section), assessed the judgments of school administrators and others regarding the importance and feasibility of collecting particular items of information on the post-school outcomes of former students. The study by Bruininks et al. (1988) used multivariate statistical procedures to identify reliable dimensions for future studies of community adjustment. These analyses and the results presented in this report have resulted in the development of recommendations for future assessment of outcomes in post-school studies.

The results of this project have several implications for future follow-up endeavors, particularly those that are conducted by schools and school programs. Though designed to take a minimal amount of time, the data collection activities in the current post-school follow-up study still were more labor intensive than is probably feasible without considerable external support. The interview instrument (PTS) was quite extensive and time consuming to complete. Schools very likely will not have the time, the personnel, nor the interest in collecting this kind of extensive information on a routine basis. In fact, much of the information is not necessary for school assessment of former students' outcomes. For example, information on previous jobs and previous living arrangements probably is not needed. Furthermore, extensive information on which days of the week a former student works or how often the former student engages in various leisure activities may not be needed. We do argue, however, that schools need to assess more than employment outcomes for former students. Key issues that should be included relate to the former students' independence, both financially and socially. The extent to which support is required and the nature of the former students' social networks also are considered to provide useful information for schools to use in planning programs.

For schools in need of collecting follow-up information to be able to describe the post-school outcomes of former students, the PTS interview could be revised to include primarily those items most useful for this purpose. A possible outline of a revised assessment is shown in Table 46. This suggested outline is based on the desirability of assuring continuity with previous research on the post-school outcomes of former students in special education (see the research synthesis reported in Table 4) and from

Table 46
Proposed Outline for a Revised Follow-up Interview for School Use

A. Demographic Information (Subject's name and birthdate; Respondent's name, relationship to subject, and years known; Interviewer name and date of interview)
B. Functional Characteristics
   1. Physical, sensory, and health limitations
   2. Adaptive behavior
   3. Problem behaviors
C. Current Activities
   1. Does subject work? If yes:
      a. How long?
      b. Type of job (competitive, sheltered, work/day activity center, volunteer, other)
      c. Average income per month
      d. Additional job benefits (tips, bonuses, health coverage, insurance)
      e. Satisfaction with job
      f. Ever unemployed?
   2. Is subject a full-time student or in job training? If yes:
      a. Type of program (job training, community college, college)
      b. Average hours per week
      c. On waiting list for another program? If yes, how long?
   3. Is subject a day program participant? If yes:
      a. Type of program (work opportunity, work activity, etc.)
      b. Average hours per week attend
      c. On waiting list for another program? If yes, how long?
      d. Satisfaction with day program
   4. Is subject not working and not in education or day program? If yes:
      a. Is subject full-time homemaker?
      b. Is subject unable to find work? If yes, how long unemployed?
      c. Is subject disabled (getting SSI benefits)?
      d. Is subject not working because doesn't want to?
D. Living Arrangements, Family and Friends
   1. Where does subject live? (alone, parents, foster parents, relatives, friends, spouse, halfway house, apartment training, residential < 6, residential >6, institution).
   2. On waiting list for another living arrangement? If yes, how long?
   3. Satisfaction with living arrangement
   4. Married?
   5. Children? If yes, how many?
   6. How often see relatives per month?
   7. Number of close friends and where met each
E. Community Involvement
   1. Three most frequent free-time activities
   2. Registered voter?
   3. Pay federal income taxes?
   4. Problems with law or police?
   5. Use telephone to talk to: (a) Relative? (b) Friend? (c) Business? (d) Social group?
F. Financial Independence
   1. Receive support payment per month: (a) SSI? (b) Disability? (c) Welfare? (d) Other?
   2. Receive medical payments: (a) Medicare? (b) Medicaid?
   3. Receive food stamps?
   4. Has checking account? If yes, uses it independently?
   5. Has savings account? If yes, uses it independently?
   6. Goes shopping? If yes, pays for purchases independently?

evaluating the judgments of persons who would use such information to improve services (see Lange et al., 1988). It includes information from the ICAP as well as information from selected items on the PTS interview.

For schools in need of collecting follow-up information that can be used in evaluating programs for students, an even shorter follow-up format is possible. Twenty-one variables from the PTS and ICAP can be used to form eight factors. Principal component analysis of the 21 variables (see Bruininks et al., 1988) followed by varimax rotation indicated that six eigenvalues were greater than one, suggesting that at least six factors should be extracted. An eight-factor solution appeared most meaningful, however, in interpreting the results of personal competence and outcomes measures.

In the area of personal competence, four consistent factors emerged. A Personal Independence or general adaptive behavior factor (Factor 1) was identified by primary loadings for the ICAP adaptive behavior clusters (i.e., Personal Living, Community Living, Social/Communication, and Motor Skills). Consistent with the Personal Independence factor interpretation were the high loadings on this factor for the Need for Social Support and Economic Independence variables. Factor 2 was defined by the three ICAP maladaptive behavior indexes, and appears to represent a general Maladaptive Behavior or emotional competence dimension. The remaining two personal competence factors appeared to represent different aspects of physical competence. Factor 3 was defined by the Physical Mobility and Need for Health Care scales created from the ICAP. This factor was labeled Physical Mobility, since the two defining scales tapped the extent to which an individual can move freely about the environment without the need for assistance. Finally, Factor 4 was defined by a single loading for the ICAP created Physical Complications scale. This Physical Complications factor appears to reflect the number of significant sensory-physical conditions possessed by an individual. Although the Physical Mobility and Physical Complications factors are intuitively similar (both tap aspects of physical competence), these factors failed to merge into a single factor in most solutions.

Four community adjustment dimensions were identified, primarily from the post-school interview. Factor 5 was a Social/Recreation/Leisure dimension, and was consistently defined by the Variety of Friends, Number of Friends, and Recreation/Leisure (Community-Social) variables. This factor appears to represent the extent to which an individual has developed an active social network and the extent to which the individual is actively involved in community-based recreation/leisure activities. When a nine factor solution was extracted, this factor split into separate social (i.e., Variety and Number of Friends) and recreation/leisure (i.e., Recreation/Leisure-Community-Social) factors. This suggests that if other indicators of recreation/leisure activities had been included in the analysis, separate social and recreation leisure dimensions may have been identified (when the recreation/leisure variable was split into two separate subscales this did occur).

Factor 6 was defined primarily by the Number of Limiting Factors and Number of Support Services scales created from the ICAP. This factor appears to define a Social and Service Support dimension of community adjustment. Finally, factors seven and eight appear to represent dimensions of Financial Independence and Community Independence/Integration. Factor 8 was consistently defined by economic/financial variables. This bipolar factor was defined by the degree to which an individual receives external income support (high negative loading for Income Support), in contrast to

positive loadings for variables measuring the degree to which an individual earns income (Earned Income) during daytime activities (Daytime Activities). The seventh factor appears to represent the degree to which an individual is self-sufficient and integrated in the community (i.e., Community Independence/Integration), since it was defined by high loadings for degree of independence in living (Living Arrangement), degree to which the primary daytime activity approaches competitive employment (Daytime Activity), the degree of financial independence (Economic Independence, Earned Income), and the degree to which there is freedom from the need for social and service support (Need for Social Support, Number of Support Services). In a seven factor solution the Financial Independence and Community Independence/Integration factors merged into a single factor.

Results of this and previous studies support the conclusion that functional behaviors, aspects of personal competence, and social, economic, and community outcomes are all important aspects in assessing community adjustment of former students (see Bruininks & McGrew, 1987; Bruininks et al., 1988; Greenspan, 1979; Lange et al., 1988; Parmenter, 1987). With information collected on a relatively small number of items, schools can merge findings into factors that are indicative of community adjustment, and these factor scores then can be used to evaluate programs and the continuing needs of former students. Through systematic study, schools, rehabilitation agencies, and other adult service programs can identify factors in post-school outcomes to improve school programs and transitional services, and to provide the necessary social and service supports to enhance the independence and community living of youth and adults with disabilities.

REFERENCES

Baller, W. R., Charles, D. C., & Miller, E. L. (1967). Mid-life attainment of the mentally retarded: A study. Genetic Psychology Monographs, 75(2), 235-329.

Brickey, M. P., Campbell, K. M., & Browning, L. J. (1985). A five-year follow-up of sheltered workshop employees placed in competitive jobs. Mental Retardation, 23(2), 67-73.

Bruininks, R. H., Hill, B. K., Weatherman, R. F., & Woodcock, R. W. (1986). Inventory for client and agency planning. Allen, TX: DLM Teaching Resources.

Bruininks, R. H., & McGrew, K. (1987). Exploring the structure of adaptive behavior (Report No. 87-1). Minneapolis, MN: University of Minnesota, Department of Educational Psychology.

Bruininks, R. H., McGrew, K. S., Thurlow, M. L., & Lewis, D. R. (1988). Dimensions of community involvement among young adults with intellectual disabilities. Paper presented at the 8th IASSMD Congress, Dublin.

Bruininks, R. H., Thurlow, M., & Gilman, C. (1987). Adaptive behavior and mental retardation. Journal of Special Education, 21(1), 69-88.

Bruininks, R. H., Thurlow, M. L., Lewis, D. R., & Larson, N. W. (1988). Post-school outcomes for students in special education and other students one to eight years after high school. In R. H., Bruininks, D. R. Lewis, & M. L. Thurlow (Eds.), Assessing outcomes, costs and benefits of special education programs (Report Number 88-1). (pp. 9-111). Minneapolis: University of Minnesota, Department of Educational Psychology, University Affiliated Program on Developmental Disabilities.

Calkins, C.F., Walker, H.M., Bacon-Prue, A., Gibson, B., Martinson, M.C., & Offner, R. (1985). The learning adjustment process: Implications of a national profile of adult development. Logan: Utah State University, Developmental Center for Handicapped Persons.

Cho, E., & Schuerman, A. C. (1980). Economic costs and benefits of private gainful employment of the severely handicapped. Journal of Rehabilitation, 46(3), 28-32.

Delp, H. P., & Lorenz, M. (1953). Follow-up of 84 public school special class pupils with IQs below 50. Journal of Mental Deficiency, 58, 175-182.

Edgar, E. (1987). Secondary programs in special education: Are many of them justifiable? Exceptional Children, 53(6), 555-561.

Edgar, E., Horton, B., & Maddox, M. (1984). Postschool placements: Planning for public school students with developmental disabilities. Journal for Vocational Special Needs Education, 6(2), 15-18, 26.

Edgar, E., & Levine, P. (1986). Washington state follow-up studies of post-secondary special education students in transition. Seattle: Networking and Evaluation Team, University of Washington.

Fardig, D. B., Algozzine, R. F., Schwartz, S. E., Hensel, J. W., &. Westling, D. L. (1985). Post-secondary vocational adjustment of rural, mildly handicapped students. Exceptional Children, 52(2), 115-121.

Ford, L., Dineen, J. & Hall, J. (1984). Is there life after placement? Education and Training of the Mentally Retarded, 19, 291-296.

Greenspan, S. (1979). Social intelligence in the retarded. In N. R. Ellis (Ed.), Handbook of mental deficiency, psychological theory and research (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Hasazi, S. B., Gordon L. R., & Roe, C. A. (1985). Factors associated with the employment status of handicapped youth exiting high school from 1979 to 1983. Exceptional Children, 51(6), 455-469.

Hawkins, J. A. (1984). Follow-up study of special education graduates: Class of 1983. Rockville, MD: Department of Educational Accountability. (ERIC Document Reproduction Service No. ED 256 786).

Hegge, T. G. (1944). The occupational status of higher-grade mental defectives in the present emergency. American Journal of Mental Deficiency, 46, 86-98.

Hill, M., & Wehman, P. (1983). Cost benefit analysis of placing moderately and severely handicapped individuals into competitive employment. Journal of the Association of the Severely Handicapped, 8, 30-38.

Holman, J. [illegible] Bruininks, R. H. (1985). Assessing and training adaptive behaviors. In K. C. [illegible] H. Bruininks (Eds.), Strategies for achieving community integration of [illegible] mentally delayed citizens (pp. 73-104). Baltimore: Paul H. Brookes.

Kennedy, R. [illegible] (1948). The social adjustment of morons in a Connecticut city. Hartford: Mans[illegible]outhburg Social Service.

Kranstover, L., Thurlow, M. L., & Bruininks, R. H. (1988). Special Education graduates versus non-graduates: A longitudinal study of outcomes. Minneapolis: University of Minnesota. Unpublished manuscript.

Lange, C., Thurlow, M. L., & Bruininks, R. H. (1988). Practitioners' views of follow-up and cost-benefit information needed to evaluate secondary instructional programs for handicapped students. Minneapolis: University of Minnesota, Unpublished paper.

Larson, S.A., & Lakin, K.C. (1989). Deinstitutionalization of persons with mental retardation: Behavioral outcomes (Policy Research Brief #1). Minneapolis: University of Minnesota, Research and Training Center on Community Living.

Liberty, K.A. (1985). Enhancing instruction for maintenance, generalization and adaptation. In R.H. Bruininks & K.C. Lakin (Eds.), Strategies for achieving community integration of developmentally disabled citizens (pp. 29-71) Baltimore: Paul H. Brookes.

Mathematica. (September, 1982). Videotape on "role and bias" and "probing." Princeton, NJ: Mathematica Policy Research.

McDonnell, J., & Hardman, M. (1985). Planning the transition of severely handicapped youth from school to adult services: A framework for high school programs. Education and Training of the Mentally Retarded, 20(4), 275-284.

Mithaug, D. E., Horiuchi, C. N., & Fanning, P. N. (1985). A report on the Colorado statewide follow-up survey of special education students. Exceptional Children, 51, 397-404.

Parmenter, T. R. (1987). Quality of life of people with physical disabilities. Macquaric University Mimeography.

Porter, R. B., & Milazzo, T. C. (1958). A comparison of mentally retarded adults who attended a special class with those who attended regular school classes. Exceptional Children, 24, 410-412,420.

Saenger, G. (1957). The adjustment of severely retarded adults in the community. Albany, NY: State Interdepartmental Health Resources Board.

Schalock, R. L., Wolzen, B., Ross, I., Elliott, B., Werbel, G., & Peterson, K. (1986). Post-secondary community placement of handicapped children: A five-year follow-up. Learning Disability Quarterly, 9(4), 295-303.

Semmel, D. S., Cosden, M. A., & Konopak, B. (1985). A comparative study of employment outcomes for special education students in a cooperative work placement program. Paper presented at CEC, Anaheim.

U.S. Department of Education. (1987). Ninth annual report to Congress on the implementation of The Education of the Handicapped Act. Washington, DC: U.S. Department of Education.

Walls, R., Tseng, M., & Zarin, H. (1976). Time and money for clients with mild, moderate, and severe retardation. American Journal of Mental Deficiency, 80(6), 595-601.

Wehman, P., Kregel, J., & Seyfarth, J. (1985). Transition from school to work for individuals with severe handicaps: A follow-up study. Journal of the Association of the Severely Handicapped, 10(3), 132-136.

Zigmond, N., & Thornton, H. (1985). Follow-up of post-secondary age LD graduates and drop-outs. Paper presented at AERA, Chicago.

Appendix A

Preliminary Analysis of Program Influences

Former students included in this follow-up study had been involved in several different programs when in school. As might be expected, the school district continuously sought to implement improvements or alternatives in educational programs for students with moderate to severe mental retardation. Many of the changes in programs occurred across time. Because of this, in most cases it is not possible to analyze the outcome effects of different programs; they are confounded with time out of school. One case where it is possible is for some of the students who had been out of school 3-5 years.

Figure A-1 is a flow chart of the high school programs available to students with moderate to severe mental retardation from 1973 to 1986. As is evident in this figure, it is possible to compare Programs B, C, and D during only a one-year period for our sample. Unfortunately, only seven students in our sample came from this time period. Also indicated in Figure A-1 is the possible comparison of Programs B, C, and E during a two year period (1980-1981, 1981-1982). Because this is the only reasonable comparison given our sample, only these programs are described here. The descriptions are followed by characterizations of our sample, divided according to program, and by outcome data for these former students.

Program Descriptions

Program B served students from 1977 to 1982 under a high school model. Students served in the program were identified at the time as having mental retardation at the "trainable" level. During this time period, the program was characterized as one with modified academic training in a classroom setting. Job opportunities were available, with approximately 50% (an estimate) of the students in the program working more than 50% of the day.

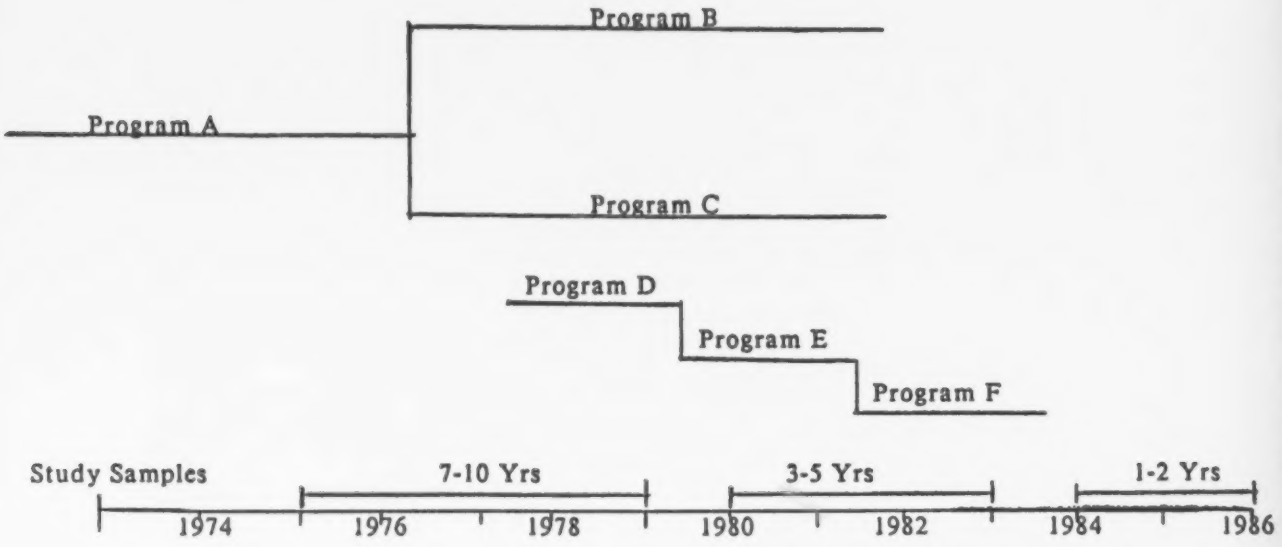
Program C also served students from 1977 to 1982 under a special class model. Students served in this program also were identified at the time as having mental retardation at the "trainable" level. The program was characterized as one providing job opportunities, generally in a special setting. It was estimated that about 25% of the students worked for more than 50% of the day.

Program E served students from 1980 to 1983 within an academic classroom setting that was characterized as also focusing on functional skills. Students served in the program were identified as having mental retardation at the "trainable" level, nearly 35% of whom had medical problems as well (data on medical problems was not available for the other programs). The percentage of students who worked more than 50% of the day was reported to be 50%. In 1980, community-based instruction was initiated with a few community sites; the number of sites increased in subsequent years. A school district description of the program reads as follows:

> [Program E] serves as the hub from which all community based programs are developed. Community options offered from [Program E] include classes in two secondary schools....., job tryouts, job training, job placements in various businesses in our community, community workshops for vocational evaluation, agri-business center, YWCA, YMCA, group homes, MARC Thrift Store, evening classes in cooperation with community education in various community locations, the use of numerous community resources and sites for regular and daily instructional visits. In essence, [Program E] utilized the entire community to deliver a (sic) individualized instructional and vocational program.

Figure A-1

Schematic Representation of High School Programs for Students with Moderate to Severe Mental Retardation



The program description also notes the existence of special departments established to meet the special developmental needs of the students, including a home living unit, an adaptive physical education program, a pre-vocational and vocational unit, an industrial arts unit, and a community integration department.

Sample Descriptions

Gender, age, and functioning level characteristics of former students in the three programs are shown in Table A-1. As is evident in this table, the three groups were similar in gender and age characteristics. Functioning level information indicates that the subjects who had been in Program B and Program E were alike, with about 25% to 30% assigned a "moderate" functioning level; 62% of the subjects in Program C were assigned this functioning level. Adaptive and problem behavior scores indicate that differences in groups probably did exist, with those whose actual adaptive functioning levels were lower and/or whose actual problem behaviors were greater being directed into Program E. Outcome differences among groups, therefore, will have to be viewed in light of these functioning level differences.

Outcome Descriptions

Information on the numbers and percentages achieving certain outcomes related to employment, day program participation, living arrangements, and financial status is provided in Table A-2. Overall, program outcomes appeared to be very similar, except for employment rates, which were highest in Program B (70%) and lowest in Program E (25%). Chi-square analysis for each variable failed to reveal any significant differences among the three programs.

Table A-1
Program Comparison Subjects

Descriptor	Program B	Program C	Program E
Total N	10	16	8
Gender (% of N in Level of Functioning Group)			
Male	4 (40%)	6 (38%)	4 (50%)
Female	6 (60%)	10 (63%)	4 (50%)
Age			
M	26.8	26.7	25.1
SD	1.6	2.1	1.3
Range	24-29	24-30	24-28
Functioning Level			
Moderate	3 (30%)	10 (62%)	2 (25%)
Severe	7 (70%)	6 (38%)	6 (75%)
ICAP Broad Independence (Mos)			
M	93.6	94.5	76.5
SD	37.1	29.6	24.7
Range	32-154	53-149	43-105
N	10	16	8
ICAP General Maladaptive			
M	-9.8	-10.4	-19.1
SD	11.3	11.8	18.0
Range	-31-0	-35-0	-58-(-4)
N	10	16	8

Table A-2
Program Comparisons for Outcomes

Outcome	Program B	Program C	Program E
Employed	7 (70%)	9 (56%)	2 (25%)
Competitive	0 --	0 --	0 --
Lives with family	4 (50%)	5 (50%)	5 (31%)
Lives in residential setting	4 (50%)	5 (50%)	11 (69%)
In Day Program	8 (80%)	11 (69%)	7 (88%)
Has Special Friends	8 (80%)	13 (81%)	6 (75%)
Has Regular Contact with Nonhandicapped	1 (10%)	2 (12%)	1 (12%)
Registered Voter	0 --	2 (12%)	0 --
Pays Federal Taxes	3 (30%)	2 (12%)	0 --
Shops for Self	9 (90%)	16 (100%)	7 (88%)
Pays Salesperson	3 (33%)	6 (38%)	2 (29%)
Has Savings Account	6 (60%)	9 (56%)	3 (38%)
Uses Account	0 --	1 (11%)	0 --
Has Checking Account	1 (10%)	2 (12%)	1 (12%)
Uses Account	0 --	0 --	0 --
Uses Independent Transportation	1 (10%)	4 (25%)	1 (12%)
Uses Telephone	6 (60%)	10 (62%)	3 (38%)